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1910-1911

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THE CATALOGUE
OF
BROWN UNIVERSITY

ONE HUNDRED & FORTY-SEVENTH YEAR

1910-1911

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of the
University of Illinois

PROVIDENCE, RHODE ISLAND
PUBLISHED BY THE UNIVERSITY
1910

D. B. UPDIKE, THE MERRYMOUNT PRESS, BOSTON

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1910-11

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CALENDAR 1910–1911

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THE UNIVERSITY CALENDAR 1910–11‡

1910

September 7.	*Wednesday.* Annual Meeting of the Corporation (first Wednesday in September).
September 22–27.	*Thursday, Friday, Saturday, Monday, and Tuesday.* Examinations for admission to the Freshman class and to advanced standing.
September 26, 27.	*Monday and Tuesday.* Registration of new students and enrolment of students previously in residence.
September 28.	*Wednesday.* Academic Year begins (fourth Wednesday in September). Last day for registration of Graduate students.
October 8.	*Saturday.* Examination in Greek for the President's Premiums, 5 Maxcy Hall, 2.30 p.m.
October 12.	*Wednesday.* Examination in Latin for the President's Premiums, 1 Sayles Hall, 2.30 p.m.
October 15.	*Saturday.* Examination in Mathematics for the Hartshorn Premiums, 27 Wilson Hall, 2 p.m.
October 19.	*Wednesday.* Examination in French for the Hicks Premiums, 1 Sayles Hall, 2.30 p.m.
October 22.	*Saturday.* Examination in German for the Hicks Premiums, 5 Sayles Hall, 2.30 p.m.
November 24.	*Thursday.* Thanksgiving Day. No University exercises.
December 14–22.	*Wednesday to Thursday.* Term examinations.
Dec. 23, 1910 to January 3, 1911.	*Thursday to Tuesday.* Christmas Recess.

1911

January 2, 3.	*Monday and Tuesday.* Enrolment of Undergraduate students.
January 4.	*Wednesday.* Second Term begins.

‡ Beginning with 1911-12, the college year will be divided into *two* terms.

JANUARY 31.	*Tuesday.* Last day for applications of competitors for the Carpenter Prizes in Elocution. Preliminary discussion for the Class of 1880 Prizes.
FEBRUARY 2.	*Thursday.* Last day for receiving essays submitted in competition for the Class of 1880 Prizes.
FEBRUARY 7.	*Tuesday.* Public discussion for the Class of 1880 Prizes.
FEBRUARY 22.	*Wednesday.* Washington's Birthday. No University exercises.
MARCH 13–21.	*Monday to Tuesday.* Term examinations.
MARCH 22–28.	*Wednesday to Tuesday.* SPRING RECESS.
MARCH 27, 28.	*Monday and Tuesday.* Enrolment of Undergraduate students.
MARCH 28.	*Tuesday.* Last day for receiving essays submitted in competition for the Gaston Prize Medal.
MARCH 29.	*Wednesday.* THIRD TERM BEGINS.
APRIL 1.	*Saturday.* Last day for receiving applications for examination for the degree of Doctor of Philosophy, or of Master of Arts *in absentia.*
APRIL 15.	*Saturday.* Last day for receiving applications for the Grand Army of the Republic Fellowship.
APRIL 29.	*Saturday.* Last day for receiving theses of candidates for the degree of Doctor of Philosophy. Last day for receiving Commencement orations.
MAY 2.	*Tuesday.* Carpenter Prize Speaking Competition.
MAY 6.	*Saturday.* Last day for receiving essays submitted in competition for the Bishop McVickar prizes.
MAY 9.	*Tuesday.* Gaston Prize Medal Competition.
MAY 16.	*Tuesday.* Hicks Prize Debate.
MAY 30.	*Tuesday.* Memorial Day. No University exercises.
JUNE 1.	*Thursday.* Last day for examinations for advanced degrees.

June 8–16.	*Thursday to Friday.* Term examinations.
June 18.	*Sunday.* Baccalaureate Sermon, First Baptist Meeting House, 4.30 p.m.
June 19.	*Monday.* Class Day.
June 20.	*Tuesday.* Annual Meeting of the Phi Beta Kappa Society, Administration Building, 9.30 a.m. Ivy Day, Pembroke Hall. Annual Meeting of the Associated Alumni, Manning Hall, 2 p.m. Oration before the Phi Beta Kappa Society, Sayles Memorial Hall, 4 p.m.
June 21.	*Wednesday.* One Hundred and Forty-Third Annual Commencement (third Wednesday in June), First Baptist Meeting House, 10 a.m.
June 22.	*Thursday.* Meeting of the Corporation.
June 22 to Sept. 26.	Summer Vacation.
September 6.	*Wednesday.* Annual Meeting of the Corporation (first Wednesday in September).
September 20–25.	*Wednesday, Thursday, Friday, Saturday, and Monday.* Examinations for admission to the Freshman class and to advanced standing
September 25, 26.	*Monday and Tuesday.* Registration of new students and enrolment of students previously in residence.
September 27.	*Wednesday.* Academic Year begins (fourth Wednesday in September).

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† On leave of absence during the academic year 1910–11.
‡ On leave of absence during the first term of the academic year 1910–11.

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ARTHUR UPHAM POPE, A.M. — 270 Benefit Street
Instructor in Philosophy

GILBERT CHINARD, B. ès L., L. ès L. — 11½ John Street
Instructor in French

MOSES LEVEROCK CROSSLEY, Sc.M. — 250 Doyle Avenue
Instructor in Chemistry

NELSON CLARK DALE, Sc.B. — 9 Charles Field Street
Instructor in Geology

FRED WAHN BEAL, A.M. — 256 Doyle Avenue
Instructor in Mathematics

JOHN HERBERT BACHMANN, A.M. — 86 Prospect Street
Instructor in German

JOHN JOSEPH LONG, PH.B. — 26 West School Street, Woonsocket
Instructor in Mechanical Drawing

NORMAN EDWARD HOLT, A.B. — 115 Governor Street
Instructor in Chemistry

ROBERT FRANKLIN FIELD, A.M. — 25 Wilson Street
Assistant in Physics

LAURENCE RICH GROSE, A.M. — 92 Williams Street
Assistant in English

ROBERT FOSTER CHAMBERS, Sc.M. — 89 Courtland Street
Assistant in Chemistry

WALTER BROOKS HENDERSON, PH.B. — 21 Caswell Hall
Assistant in English

ALBERT ARNOLD BENNETT, A.M. — 100 Waterman Street
Assistant in Mathematics

JAMES ALEXANDER HALL, A.B., Sc.B. — 31 Pocasset Avenue
Assistant in Mechanical Engineering

HERMAN ADOLF LIEBIG, A.B. — 153 Benefit Street
Assistant in German

ALBERT POTTER FARWELL, PH.B. — 32 Carleton Street
Assistant in Chemistry

LOUIS JOHN GILLESPIE, PH.B. — 313 Maxcy Hall
Assistant in Physics

ROBERT FRANCIS SEYBOLT, PH.B. — 71 Olive Street
Assistant in Education

FARNHAM BISHOP, A.M. — 36 University Hall
Assistant in English

JOHN BURNHAM FERGUSON, A.B., M.D. *Demonstrator in Anatomy*	369 Broad Street
THERON CLARK, A.B. *Assistant Registrar*	152 Congdon Street
EMMA BRADFORD STANTON, A.M. *Registrar of the Women's College*	Bristol
HENRY DEWEES CADY *Instructor in Shop Practice*	Warren
EDWIN AYLSWORTH BURLINGAME *Superintendent of Grounds and Buildings*	359 Brook Street
GEORGE ARNOLD MATTESON, M.D. *Physician to the University*	276 Benefit Street
EARL NORTHUP MANCHESTER, A.B. *Reference Librarian*	66 Meeting Street
LLOYD WILLIAM JOSSELYN *Assistant Librarian*	27 Benefit Street
LAURA RUSSELL GIBBS, L.S.B. *Cataloguer*	66 College Street
WALTER COLBURN ROBERTSON *Assistant Cataloguer*	Lakewood
ALICE SCOTT MAILE, PH.B. *Assistant Cataloguer*	Edgewood
GERTRUDE MARY ALLEN, PH.B. *Clerk in the Library*	Riverside
REBECCA PHILLIPS STEERE *Cataloguer in the John Carter Brown Library*	84 Waterman Street
JOHN EDWARDS *Assistant in the Ladd Observatory*	Ladd Observatory
LOUISE PROSSER BATES *Keeper of Graduate Records*	Oak Lawn

STANDING COMMITTEES OF THE FACULTY

ON REGISTRATION AND ATTENDANCE

Dean MEIKLEJOHN, Professors UPTON, RANDALL, DELABARRE, and FOWLER, Dean KING, Mr. GUILD.

ON THE CURRICULUM

Professors POLAND, DAVIS, HARKNESS, GARDNER, RANDALL, BRONSON, EVERETT, HILL, MEAD, MEIKLEJOHN, MACDONALD, and VON KLENZE, Mr. GUILD.

ON STUDENT ORGANIZATIONS

Professors Delabarre, Langdon, Hill, Potter, Meiklejohn, and Marvel.

ON STUDENT ADVISERS

Professors Greene, Crosby, Kirk, and Richardson.

OFFICE HOURS

THE PRESIDENT. 7 Administration Building: *11.30 a.m. to 12.30 p.m., except Mondays and Saturdays.*

THE DEAN OF THE UNIVERSITY. 5 Administration Building: *1.30 to 2.30 p.m., except Saturdays.*

THE REGISTRAR, AND SECRETARY OF THE FACULTY. 4 Administration Building: *8.30 a.m. to 4 p.m.; Saturdays to 1 p.m. Consultation Hours, 12 m. to 1 p.m., 3 to 4 p.m.*

THE ASSISTANT REGISTRAR. 4 Administration Building: *8.30 a.m. to 12 m., 1.30 to 4 p.m.; Saturdays to 1 p.m.*

THE DEAN OF THE GRADUATE DEPARTMENT. 5 or 6 Wilson Hall: *12.20 to 1.20, and 3.20 to 4.20 p.m.*

THE LIBRARIAN OF THE UNIVERSITY. The University Library: *9 to 10 a.m., 3 to 4 p.m.*

THE LIBRARIAN OF THE JOHN CARTER BROWN LIBRARY. The Library: *9 a.m. to 5 p.m.*

THE SECRETARY OF THE TEACHERS' BUREAU. 10 Administration Building: *4.20 p.m. Mondays and Fridays*; *5.20 p.m. Wednesdays; 12.20 p.m. Saturdays.*

THE SUPERINTENDENT OF GROUNDS AND BUILDINGS. 1 University Hall: *8 to 9 a.m.; 1.30 to 2.30 p.m.*

THE DEAN OF THE WOMEN'S COLLEGE. Pembroke Hall, Meeting Street: *10.15 to 11.25 a.m., except Saturdays.*

THE REGISTRAR OF THE WOMEN'S COLLEGE. Pembroke Hall, Meeting Street: *9 a.m. to 1 p.m., 2.30 to 4 p.m.; Saturdays 9.15 a.m. to 1 p.m.*

HISTORY OF BROWN UNIVERSITY

A GENERATION before the establishment of any institution of higher education in Rhode Island, Dean (afterwards Bishop) Berkeley, in pursuance of his cherished design of planting a Christian college in America, chose this colony as his place of residence. Here, at Newport or in its vicinity, he lived for nearly three years, from 1729 to 1731. At the close of this period it became evident that the money which had been voted for the project by the House of Commons would not be paid, and Berkeley reluctantly abandoned his project and returned to England. Though he had no direct relation to the college afterwards established, yet he inspired an interest in higher education among the colonists and thus made easier the success of the later undertaking.

In 1762 the Philadelphia Baptist Association, in view of the disabilities attaching to Baptist students in most of the existing American colleges, welcomed a proposal offered by the Reverend Morgan Edwards, a clergyman of Welsh birth, at that time pastor of the First Baptist Church in Philadelphia, to found in Rhode Island a college that should be under the control of their own denomination. James Manning, who had just been graduated from Princeton, was appointed by the Association as its agent to establish "a seminary of polite literature subject to the government of the Baptists."

In deciding upon the location of the new college, a canvass of the colonies had shown the advantages to be clearly on the side of Rhode Island, which recognized absolute religious liberty, and was, moreover, a Baptist colony in origin and popular attachment. There was no rival institution in the field; and the important cities of Newport and Providence, the former being the second city in New England, furnished an encouraging prospect of future support. Accordingly, in 1764, the friends of the movement obtained from the General Assembly the charter which still remains in force. Although, under the rules of the charter, the President and a majority of both the Fellows and the Trustees must be Baptists, the three important positions of Chancellor, Secretary, and Treasurer are without denominational restriction, and all religious tests and sectarian instruction are strictly prohibited. The institution was known during the first forty years of its existence as Rhode Island College.

As the College was at the beginning without funds, and only a scanty return could be expected from students' fees, it was necessary that the president should support himself and his family by some other means. The founding of a Baptist church in Warren and the call of Mr. Manning to its pastorate offered a solution of the difficulty; and hither Mr. Manning brought his family in the spring of 1764. His first act towards the establishment of a college was the opening of a Latin school. This preparatory school was later removed with the College to Providence, where it flourished for a hundred and forty years under the name of the University Grammar School. At the second meeting of the Corporation, September 4, 1765, Mr. Manning was formally appointed "president of the College, professor of languages and other branches of learning;" the first student had been matriculated the day before. In the following year David Howell was appointed tutor, but no other addition was made to the Faculty until 1774. In 1769 the first class (of seven members) was graduated at Warren. This town had not generally been regarded as the permanent seat of the College, and the necessity which now arose of erecting a college building compelled a final choice of location. After a spirited contest for the honor among the leading towns of the colony, the choice fell upon Providence. Here in 1770 the first college building, the present University Hall, modeled after Nassau Hall at Princeton, and a house for the president were both built on the college grounds, the cost being covered by subscriptions, chiefly from residents of Providence.

In 1771 President Manning was called to the pastorate of the First Baptist Church in Providence; he served the church in this capacity, in addition to his college duties, from that date until the close of his life. In December, 1776, the work of the College was interrupted by the Revolutionary War, and it was not resumed until the fall of 1782, University Hall being used meanwhile as a barrack and hospital for the combined American and French troops. Upon the reorganization of the College important additions were made to the library and the philosophical apparatus. The first college funds, amounting to $4500, were collected in England and Ireland by the Reverend Morgan Edwards in 1767–8. In the next two years the Reverend Hezekiah Smith obtained subscriptions amounting to $2500 in South Carolina and Georgia. The former contribution was made a permanent fund; the latter was expended in the construc-

tion of the college buildings. Further gifts were received for a time from the Philadelphia, Charleston, and Warren Baptist Associations, but they appear to have ceased with the outbreak of the Revolutionary War. In 1791, after twenty-nine years of service as founder and director of Rhode Island College, President Manning died. The College had become firmly established, with a graduate roll of one hundred and forty-nine; the last graduating class, that of 1790, had numbered twenty-two. At the time of his death the Faculty consisted of the president, four professors, and two tutors. The discipline during this period had been strict and paternal, the officers of instruction living under the same roof with the students and making frequent visits of inspection to their rooms. President Manning at first taught all the branches studied, but was designated professor of languages, afterwards of moral philosophy. David Howell, his assistant, taught mathematics and natural philosophy, and is said to have taught also French, German, and Hebrew. He was appointed professor of natural philosophy in 1769, and of law in 1790, but never taught the latter subject. Benjamin Waterhouse was appointed professor of natural history in 1784; and Benjamin West, professor of mathematics and astronomy in 1786.

The successor of President Manning was the Reverend Jonathan Maxcy, a graduate in the class of 1787, who had been professor of divinity 1791–2. He served from 1792 until 1802, when he resigned his office to accept the presidency of Union College. During the last year of his administration at Rhode Island College a class numbering twenty-eight was graduated.

The third president of the College, the Reverend Asa Messer, a graduate in the class of 1790, who had served as professor of learned languages 1796–9, and of mathematics and natural philosophy 1799–1802, directed the affairs of the institution from 1802 until his resignation in 1826. During his presidency of twenty-four years the College was greatly expanded. A class numbering forty-eight was graduated in 1825, the Faculty in that year consisting of the president, nine professors, and two tutors. A medical school was established, which existed from 1811 until 1828 and sent out eighty-seven graduates. The special professorships created for the medical school were: materia medica and botany, 1811; anatomy and surgery, 1811; chemistry, 1811; theory and practice of medicine, 1815. A professor of moral philosophy and metaphysics was appointed in 1811; one of oratory and belles-lettres in 1815; and one of the Latin and

Greek languages and literature in 1825. In 1826 the permanent funds of the University amounted to $31,300.

In 1792 Nicholas Brown, a graduate in the class of 1786, gave $500 with which to purchase law books for the Library. In 1804 he endowed a professorship of oratory and belles-lettres. In the same year the name of the institution was changed in his honor to Brown University. In 1822 he built Hope College at his own expense, in 1834 Manning Hall, and in 1840 the second president's house. The last-named building has been used since 1899 as a refectory. The total value of Mr. Brown's various gifts to the University was not less than $160,000. Mr. Brown also served the University in a most efficient way as treasurer 1796–1825. He was trustee 1791–1825, and fellow from 1825 until his death in 1841.

The fourth president, the Reverend Francis Wayland, entered upon his official duties in 1827. He at once raised the standard of scholarship and gradually increased the scope of the instruction. He finally accomplished an entire reorganization of the University on the basis of the elective principle. In accordance with this "New System," the bachelor's degree was given for a three years' course and the master's degree for a four years' course. Graduate study and special study were both encouraged; and the sciences, in accordance with the spirit of the charter, were made prominent in the curriculum. This system was not put into operation until 1850, and was fully in force only until his retirement five years later. The increase in the scope of the curriculum during President Wayland's administration is clearly shown in the following list of subjects to which professors or instructors were assigned at the dates annexed: chemistry, physiology, and geology, 1834; moral and intellectual philosophy, 1834; belles-lettres, 1835; rhetoric, 1837; Hebrew literature, 1838; modern languages and literature, 1843; Greek, 1843; Latin, 1844; French, 1844; history and political economy, 1850; natural philosophy and civil engineering, 1850; chemistry applied to the arts, 1850; rhetoric and English literature, 1851; didactics (*i. e.*, pedagogy), 1851; analytical chemistry, 1854. The influence of President Wayland was felt, not in an increase of the number of students, but in an elevation of the intellectual and moral tone of the institution. Discipline, which had grown lax, was strictly enforced. During his administration the college grounds were laid out, and the Library was placed on a sound financial basis. Rhode Island Hall was erected in 1840 from sub-

scriptions by Rhode Island men and women. The permanent funds were increased to $200,000. Dr. Wayland resigned the presidency in 1855, having won for the University, by his fame as a writer, thinker, and educational reformer, an enviable distinction both at home and abroad.

The fifth president of the University, the Reverend Barnas Sears, a graduate in the class of 1825, held office from 1855 until 1867, when he resigned the presidency to become general agent of the Peabody Education Fund. During his incumbency the only new subject added to the curriculum was physical geography, in 1864. Although the term of President Sears covered the financial crisis of 1857 and the Civil War, a notable increase was made both in the funds and in the number of students. A system of scholarships was established, and over $220,000 was collected in subscriptions. The Chemical Laboratory was built in 1862. In the last class that entered under President Sears seventy-three students were enrolled. Three hundred graduates and students of Brown entered the Union service, 1861–5. Of these twenty-one laid down their lives.

The Reverend Alexis Caswell, a graduate in the class of 1822, was the sixth president of the University, his term covering the years 1868–72. Under his administration the department of physics was organized, and the endowment was increased from $365,000 to a sum exceeding $550,000.

Upon the resignation of Dr. Caswell, the Reverend Ezekiel Gilman Robinson, a graduate in the class of 1838, became president. Dr. Robinson's presidency extended over the seventeen years 1872–1889. This period was marked by a further increase in the attendance, the class of 1889 being graduated with a membership of fifty-six. The following subjects were added to the curriculum, or were emphasized by the appointment of separate instructors: special branches of agriculture, 1872; zoölogy and agriculture, 1874; physiology, 1874; botany, 1877; zoölogy and geology, 1878; elocution, 1880; astronomy, 1884; logic, 1886; history, 1888; political economy, 1888. The funds were increased to $980,000, and important additions were made to the buildings. Rhode Island Hall was enlarged in 1875. The Library, the gift of John Carter Brown, of the class of 1816, was built in 1878, and Slater Hall, the gift of Horatio Nelson Slater, in 1879. Sayles Hall, the gift of William Francis Sayles, a memorial to his son, William Clark Sayles, a member of the class of 1878, was built in 1881. University Hall, which had been renovated

in 1850, was again renovated in 1883. Dr. Robinson recognized the fact that a great opportunity for a university existed at Brown, and, though he was not able fully to realize his purposes, he prepared the way for the great enlargement of the institution under his successor. Besides the addition of various courses, a beginning was made in systematic graduate instruction. Dr. Robinson resigned the presidency in 1889.

The eighth president of the University was the Reverend Elisha Benjamin Andrews, a graduate in the class of 1870. With his accession in 1889 the modern life of the University properly begins. In the year preceding his presidency three graduate students were enrolled; in the last year of his term of service the graduate students numbered 101, the total number of students for the same years being, respectively, 268 and 860. The officers of instruction for the corresponding years increased in number from twenty-two to seventy-three. All the old departments were expanded, and the number of departments was increased from sixteen in 1889–90 to twenty-five in 1897–8. The department of philosophy was enlarged by the addition of psychology and pedagogy. American and European history were assigned to separate professors, and political economy was made a department. The departments of Greek literature and history, Roman literature and history, English literature and language, Germanic languages and literatures, and Romance languages and literatures were reorganized and extended. Rhetoric and oratory were made an independent department. The departments of mathematics, mechanical engineering, astronomy, physics (including electrical engineering), chemistry, zoölogy, geology, and anthropology, and botany were extended in scope and thoroughness. New departments were formed for the subjects of social and political science including law, fine arts including the history of art and music, Indo-European philology, Biblical literature and history including the Semitic languages and New Testament Greek, mechanical drawing, civil engineering, comparative anatomy, military science and tactics, and bibliography.

The museum of fine arts was founded in 1889, and that of anthropology in 1891. The funds were increased to $1,125,685, and important additions were made to the buildings and grounds. In 1891 Hope College was renovated; Wilson Hall, the bequest of George Francis Wilson, was built; the Ladd Observatory was presented to the University by the Honorable Herbert W. Ladd; and the Lyman

Gymnasium, named in honor of its principal donor, was erected. Maxcy Hall was built in 1895. Three buildings, known as the Howell, Messer, and Brown Street houses were also secured for dormitory purposes. The old playground of the University, now known as Lincoln Field, was graded and fitted up for ball-games and other athletic purposes in 1889. In 1898 a new athletic field was laid out on Camp Street, a mile and a half from the University. In 1891 the Grand Army of the Republic Fellowship Fund of $10,000 was given to the University by the Rhode Island Department of that organization.

The Women's College was founded in October, 1891. At first only the privileges of University examinations and certificates of proficiency were granted. In June, 1892, all the College and University degrees and the graduate courses were opened to women. In November, 1897, the institution was accepted by the Corporation and officially designated the Women's College in Brown University. The immediate charge of this department, as of all others in the University, is in the hands of the Corporation. All instruction is given by members of the University Faculty. Pembroke Hall, which was built by the Rhode Island Society for the Collegiate Education of Women, was formally transferred to the University in October, 1897, and was accepted as the recitation hall of the Women's College.

In 1898 Dr. Andrews resigned the presidency to become Superintendent of Schools in Chicago. Dr. Benjamin Franklin Clarke, the senior member of the Faculty, who had served as president *pro tempore* during the absence of Dr. Andrews in Europe in 1896–7, was appointed president *ad interim*, and served during the academic year 1898–9.

The ninth president of the University is the Reverend William Herbert Perry Faunce, a graduate in the class of 1880, who entered upon his official duties on Commencement Day, 1899. At Commencement, 1900, announcement was made of an addition of over a million dollars to the endowment of the University. To this was added a year later a second million, including the endowment of the John Carter Brown Library. In 1900 the Slater Memorial Homestead was presented by Mrs. Horatio N. Slater, as a home for the students of the Women's College. In 1901 the president's house was erected at the corner of Hope and Manning streets. In 1902 the Van Wickle Administration Building was completed, this structure as well as the gates opposite being the bequest of Augustus Stout Van Wickle, of

the class of 1876. In 1904 Rockefeller Hall, the gift of John D. Rockefeller, was opened for the use of the Brown Union, a social organization of students and alumni which was formed in that year. In the same year the Engineering Building, on Lincoln Field, Caswell Hall, a dormitory fronting on Thayer Street, and the Colgate Hoyt swimming-pool, the gift of Colgate Hoyt, were erected, and a great organ, the gift of Lucian Sharpe, of the class of 1893, was placed in Sayles Hall. In 1904 the John Nicholas Brown Gate was built as a memorial to the late John Nicholas Brown by his widow. In the same year the Carrie Tower, a clock tower, erected by Paul Bajnotti, of Turin, to the memory of his wife, Carrie Mathilde Brown, was presented to the University. Since 1901 an iron fence with brick and stone posts has been built around the front and the middle campus, each section having been contributed by or in memory of some class. The classes of 1872, 1884, and 1887 have contributed gates. In the summer of 1905 the exterior of University Hall was restored to its original appearance at the expense of Marsden J. Perry. In 1906 the Gymnasium of the Women's College was erected by Mr. Frank A. Sayles as a memorial to his sister, Martha Fessenden Sayles. In 1907 the Marston Field House, the gift of Edgar L. Marston, Esq., of New York, was erected on Andrews Field. In the same year Mr. Stephen O. Metcalf gave a lot of land adjoining the Women's College and had the grounds laid out at his expense. In 1910 Miller Hall, the residence hall of the Women's College, was erected through the generosity of a group of friends. It was named in memory of Mrs. Horace G. Miller, a benefactor of the College. In April, 1910, the funds of the University, exclusive of those pertaining to the John Carter Brown Library, amounted to $3,714,546.63.

The Library of the University dates from 1767, when the Reverend Morgan Edwards collected books for it in England. The collection was at first kept in University Hall. It was removed to Manning Hall upon the completion of that building in 1835, and in 1878 was transferred to the building on Waterman Street given by John Carter Brown. In April, 1909, the corner-stone of the John Hay Library was laid; the building was occupied at the opening of the academic year 1910–11.

In 1842 the Library contained ten thousand volumes; in 1878, forty-eight thousand. The present number, including the books in the twenty department libraries, but not including the John Carter Brown Library, is one hundred and seventy thousand. The Provi-

dence Library Company, now the Athenaeum, the Library of the Rhode Island Historical Society, the State Law Library, and the State Library have been most valuable adjuncts to the University Library; and, since the opening of the Providence Public Library in 1878, members of the University have made constant use of its choice and readily available resources. The Library Fund, established under President Wayland, has been supplemented by thirteen special funds, devoted to the departments of European history, United States history, medieval and church history, botany, the arts of design, biology, the classical languages and literatures, English literature, American poetry, and Economics. Gifts of one thousand dollars each have been made to the Library by the classes of 1872, 1884, 1885, 1886, 1887, and 1888. In 1884, by the will of the Honorable Henry B. Anthony, the Library came into possession of the Harris Collection of American Poetry, numbering five thousand volumes, since increased to more than seven thousand. In 1901 there was presented to the University the John Carter Brown Library, the most complete collection in the world on the history of the two Americas down to the end of the eighteenth century; the sum of $500,000 was also given as an endowment and the sum of $150,000 for the erection of a building. The building was dedicated in May, 1904. In October, 1903, the University received by the gift of Marsden J. Perry the Sidney S. Rider Collection of manuscripts, books, and other material, forming a library of the first importance to students of the history of Rhode Island. In June, 1910, the Library received as a gift from the classes of 1899 and 1900 the Hammond Lamont Library of twenty-seven hundred volumes, chiefly in the field of eighteenth century English literature.

At the close of the one hundred and forty-second Commencement of the University, in 1910, there were enrolled the names of 7,007 graduates,—6,479 men and 528 women. Of this number 6,209 had received the College or University first degree; 118, exclusive of the foregoing, had received advanced degrees; 69, not previously reckoned, had received the degree of Doctor of Medicine; 625 others had received honorary degrees. Of the entire number, 3,944, or fifty-six per cent, were living.

THE

CHARTER OF BROWN UNIVERSITY‡

BY the Honorable the Governor and Company of the English Colony of Rhode Island and Providence Plantations in New England in America in General Assembly convened at East Greenwich within and for the Colony aforesaid on the last Monday in February One Thousand Seven Hundred and Sixty-four. *Date of the Charter*

Whereas Institutions for liberal Education are highly beneficial to Society by forming the rising Generation to Virtue, Knowledge, and useful Literature; and thus preserving in the Community a Succession of Men duly qualified for discharging the Offices of Life with Usefulness and Reputation; they have therefore justly merited and received the the Attention and Encouragement of every wise and well regulated State: And whereas a Public School or Seminary, erected for that Purpose within this Colony to which the Youth may freely resort for Education in the vernacular and learned Languages, and in the liberal Arts and Sciences would be for the general Advantage and Honor of the Government: And whereas Daniel Jenckes Esq; Nicholas Tillinghast Esq; Nicholas Gardiner Esq; Col. Josias Lyndon, Col. Elisha Reynolds, Peleg Thurston Esq; Simon Pease Esq; John Tillinghast Esq; George Hazard Esq; Col. Job Bennet, Nicholas Easton Esq; Arthur Fenner Esq; Mr. Ezekiel Gardiner, Mr. John Waterman, Mr. James Barker Junr, Mr. John Holmes, Solomon Drown Esq; Mr. Samuel Winsor, Mr. Joseph Sheldon, Charles Rhodes Esq; Mr. Nicholas Brown, Col, Barzillai Richmond, Mr. John Brown, Mr. Gideon Hoxsey, Mr. Thomas Eyres, Mr. Thomas Potter, Jun. Mr. Peleg Barker, Mr. Edward Thurston, Mr. William Redwood, Joseph Clarke Esq; Mr. John G Wanton, and Mr. Thomas Robinson with many other Persons, appear as Undertakers in the valuable Design: And thereupon a Petition hath been preferred to this Assembly, praying that full Liberty and Power may be granted unto such of them, with others, as are hereafter *Preamble*

Petition of the Undertakers

‡ *With the exception of the marginal analysis and the notes, this reprint is an exact copy of the original charter engrossed on parchment, preserved in the archives of the University.*

mentioned, to found, endow, order, and govern a College or University, within this Colony; and that, for the more effectual Execution of this Design, they may be incorporated into one Body Politic, to be known in the Law, with the Powers, Privileges, and Franchises, necessary for the Purpose aforesaid.

Now therefore know ye, That being willing to encourage and patronize such an honorable and useful Institution, we the said Governor and Company, in General Assembly convened, Do, for ourselves and our Successors, in and by Virtue of the Power and Authority, within the Jurisdiction of this Colony, to us by the Royal Charter granted, and committed, Enact, Grant, Constitute, Ordain, and Declare, And it is hereby Enacted, Granted, Constituted, Ordained and Declared, That the Hon. Stephen Hopkins Esq; the Hon. Joseph Wanton Jun. Esq; the Hon. Samuel Ward Esq; the Hon. William Ellery Esq; John Tillinghast Esq; Simon Pease Esq; James Honyman Esq; Nicholas Easton Esq; Nicholas Tillinghast Esq; Darius Sessions Esq; Joseph Harris Esq; Francis Willet Esq; William Logan Esq; Daniel Jenckes Esq; George Hazard Esq; Nicholas Brown Esq; Jeremiah Niles Esq; Joshua Babcock Esq; Mr. John G Wanton, the Rev. Edward Upham, the Rev. Jeremiah Condy, the Rev. Marmaduke Brown, the Rev. Gardner Thurston, the Rev. Ezra Stiles, the Rev. John Greaves, the Rev. John Maxson, the Rev. Samuel Winsor, the Rev. John Gano, the Rev. Morgan Edwards, the Rev. Isaac Eaton, the Rev. Samuel Stillman, the Rev. Samuel Jones, the Rev. James Manning, the Rev. Russel Mason, Col. Elisha Reynolds, Col. Josias Lyndon, Col. Job Bennet, Mr. Ephraim Bowen, Joshua Clarke Esq; Capt. Jonathan Slade, John Taylor Esq; Mr. Robert Shettell Jones, Azariah Dunham Esq; Mr. Edward Thurston Junr. Mr. Thomas Eyres, Mr. Thomas Haszard, and Mr. Peleg Barker, or such, or so many of them as shall, within Twelve Months from the Date hereof, accept of this Trust, and qualify themselves as herein after directed, and their Successors, shall be forever hereafter One Body Corporate and Politic, in Fact and Name, to be known in Law by the Name of Trustees and Fellows of the College or University, in the English Colony of Rhode Island, and Providence Plantations in New England, in America; the Trustees and Fellows at any Time hereafter, giving such more particular Name to the Col-

Original Corporators

Name

lege, in Honor of the greatest and most distinguished Benefactor, ‡ or otherwise, as they shall think proper: Which Name, so given, shall, in all Acts, Instruments and Doings of said Body Politic, be superadded to their Corporate Name aforesaid, and become a Part of their legal Appellation by which it shall be forever known and distinguished: And that, by the same Name, they and their Successors, chosen by themselves as hereafter prescribed, shall, and may, have perpetual Succession; and shall, and may be Persons able and capable, in the Law, to sue and be sued, to plead and to be impleaded, to answer and to be answered unto, to defend and to be defended against, in all and singular Suits, Causes, Matters, Actions and Doings, of what Kind soever: And also to have, take, possess, purchase, acquire, or otherwise receive and hold Lands, Tenements, Hereditaments, Goods, Chattles, or other Estates; of all which they may, and shall stand and be seized, notwithstanding any Misnomer of the College, or the Corporation thereof; and by whatever Name, or however imperfectly the same shall be described in Gift, Bequests, and Assignments, provided the true Intent of the Assignor or Benefactor be evident:

Powers of Corporation

‡ *The following is an extract from the records of a meeting of the Corporation held September 6, 1804:*

A LETTER from Mr. Nicholas Brown, dated on this present day, having been read in the following words, to—wit:

Gentlemen: PROVIDENCE, *September 6, 1804.*

IT is known to you that I have long had an attachment to this institution as the place where my deceased brother Moses and myself received our education. This attachment derives additional strength from the recollection that my late honored Father was among the earliest, and most zealous patrons of the College; and is confirmed by my regard to the cause of Literature in general. Under these impressions I hereby make a donation of Five Thousand Dollars to Rhode Island College, to remain in perpetuity as a fund for the establishment of a Professorship of Oratory and Belles Lettres. The money will be paid next Commencement and is to be vested in such funds as the Corporation shall direct for its augumentation to a sufficiency in your judgment to produce a competent annual Salary for the within mentioned Professorship.

I am very respectfully, Gentlemen, with my best wishes for the prosperity of the College, your obedient friend,

NICHOLAS BROWN.

Honored Corporation of Rhode Island College.

IT is therefore voted: That the thanks of this Corporation be presented to Mr. Nicholas Brown for the aforesaid Donation, and it is further Voted, That this College be called and known in all future time by the Name of Brown University in Providence in the State of Rhode Island and Providence Plantations.

Also the same to grant, demise, aliene, lease, use, manage and improve according to the Tenor of the Donations, and to the Purposes, Trusts, and Uses to which they shall be seized thereof.

To found,

And full Liberty, Power, and Authority is hereby granted unto the said Trustees and Fellows, and their Successors, to found a College, or University, within this Colony, for promoting the liberal Arts, and universal Literature: And with the Monies, Estates, and Revenues, of which they shall from Time to Time become legally seized as aforesaid, to endow the same: And erect the necessary Buildings and Edifices thereof on such Place within this Colony as they shall think convenient: And generally to regulate, order, and govern the same, appoint officers, and make Laws, as herein after prescribed; and hold, use, and enjoy all the Liberties, Privileges, Exemptions, Dignities and Immunities, enjoyed by any College, or University, whatever.

endow

and govern the College

And furthermore, That the said Trustees and Fellows, and their Successors, shall, and may, forever hereafter have a Publick Seal to use for all Causes, Matters, and Affairs, whatever, of them and their Successors, and the same Seal to alter, break, and make anew, from Time to Time, at their Will and Pleasure; which Seal shall always be deposited with the President, or Senior Fellow.

Seal

And furthermore, By the Authority aforesaid, It is hereby Enacted, Ordained and Declared, That it is now, and at all Times hereafter shall continue to be the unalterable Constitution of this College, or University, that the Corporation thereof shall consist of Two Branches, to wit: That of the Trustees, and that of the Fellowship, with distinct, separate, and respective Powers: And that the Number of the Trustees shall, and may be Thirty-six; of which Twenty-two shall forever be elected of the Denomination called Baptists, or Antipædobaptists; Five shall forever be elected of the Denomination called Friends, or Quakers; Four shall forever be elected of the Denomination called Congregationalists, and Five shall forever be elected of the Denomination called Episcopalians: And that the Succession in this Branch shall be forever chosen and filled up from the respective Denominations in this Proportion, and according to these Num-

Corporation with two branches

Number and denomination of the Trustees

bers; which are hereby fixed, and shall remain to Perpetuity immutably the same. And that the said Stephen Hopkins, Joseph Wanton, Samuel Ward, William Ellery, John Tillinghast, Simon Pease, James Honyman, Nicholas Easton, Nicholas Tillinghast, Darius Sessions, Joseph Harris, Francis Willett, Daniel Jenckes, George Hazard, Nicholas Brown, Jeremiah Niles, John G. Wanton, Joshua Clarke, Gardner Thurston, John Greaves, John Maxson, John Gano, Samuel Winsor, Isaac Eaton, Samuel Stillman, Russel Mason, Elisha Reynolds, Josias Lyndon, Job Bennet, Ephraim Bowen, John Taylor, Jonathan Slade, Robert Shettell Jones, Azariah Dunham, Edward Thurston Junr, and Peleg Barker, or such, or so many of them as shall qualify themselves as aforesaid, shall be, and they are hereby declared and established the first and present Trustees. And that the Number of the Fellows, inclusive of the President (who shall always be a Fellow) shall and may be Twelve; of which Eight shall be forever elected of the Denomination called Baptists, or Antipædobaptists; and the rest indifferently of any or all Denominations. And that the Rev. Edward Upham, the Rev. Jeremiah Condy, the Rev, Marmaduke Brown, the Rev. Morgan Edwards, the Rev, Ezra Stiles, the Rev, Samuel Jones, the Rev, James Manning, William Logan Esq; Joshua Babcock Esq; Mr Thomas Eyres, and Mr. Thomas Haszard, or such, or so many of them as shall qualify themselves as aforesaid, shall be, and they are hereby declared the first and present Fellows and Fellowship, to whom the President, when hereafter elected, (who shall forever be of the Denomination called Baptists or Antipædobaptists) shall be joined to compleat the Number.

Original Trustees

Number and denomination of the Fellows

Original Fellows

And furthermore, It is Declared and Ordained, That the Succession in both Branches, shall at all Times hereafter be filled up and supplied according to these Numbers, and this established and invariable Proportion from the respective Denominations by the separate Election of both Branches of this Corporation, which shall at all Times sit and act by separate and distinct Powers: And in general, in Order to the Validity and Consummation of all Acts, there shall be in the Exercise of their respective separate and distinct Powers, the joint Con-

Relative numbers always the same

Concurrent action of Trustees and Fellows

currence of the Trustees and Fellows, by their respective Majorities, except in adjudging and conferring the Academical Degrees, which shall forever belong, exclusively, to the Fellowship as a learned Faculty.

Degrees

And furthermore, It is Constituted, That the Instruction and immediate Government of the College shall forever be, and rest in the President and Fellows or Fellowship.

Government by the President and Fellows

And furthermore, It is Ordained, That there shall be a general Meeting of the Corporation on the First Wednesday in September annually, within the College Edifice, and until the same be built, at such Place as they shall appoint, to consult, advise and transact the Affairs of the College or University: At which or at any other Time, the Public Commencement may be held and celebrated. And that on any special Emergencies, the President, with any Two of the Fellows, or any Three of the Fellows, exclusive of the President, may convoke, and they are hereby empowered to convoke an Assembly of the Corporation on Twenty Days Notice: And that in all Meetings, the major Vote of those present of the Two Branches respectively, shall be deemed their respective Majorities aforesaid: Provided, That not less than Twelve of the Trustees, and Five of the Fellows, be a Quorum of their respective Branches. That the President, or, in his Absence, the Senior Fellow present, shall always be Moderator of the Fellows: That the Corporation, at their annual Meetings, once in Three Years, or oftener in Case of Death or Removal, shall, and may choose a Chancellor of the University, and Treasurer, from among the Trustees, and a Secretary from among the Fellows: That the Nomination of the Chancellor shall be in the Trustees, whose Office shall be only to preside as a Moderator of the Trustees; and that in his Absence, the Trustees shall choose a Moderator for the Time being, by the Name of Vice-Chancellor: and at any of their Meetings, duly formed as aforesaid, shall and may be elected a Trustee or Fellow, or Trustees, or Fellows, in the Room of those nominated in this

Annual Meeting

Special Meetings

Quorum

Moderator of Fellows

Chancellor, Treasurer and Secretary chosen triennially

Vice-Chancellor

Charter, who may refuse to accept, or in the Room of those who may die, resign, or be removed.

Vacancies to be filled

And furthermore, It is Enacted, Ordained and Declared, That this Corporation, at any of their Meetings, regularly convened as aforesaid, shall and may elect and appoint the President and Professor of Languages, and the several Parts of Literature: And upon the Demise of him or them, or either of them, their Resignation or Removal from his or their Office, for Misdemeanor, Incapacity, or Unfaithfulness, (for which he or they are hereby declared removable by this Corporation) others to elect and appoint in their Room and Stead: And at such Meeting, upon the Nomination of the Fellows, to elect and appoint Tutors, Stewards, Butlers, and all such other Officers usually appointed in Colleges or Universities, as they shall find necessary, and think fit to appoint for the promoting liberal Education, and the well ordering the Affairs of this College; and them or any of them, at their Discretion to remove, and substitute others in their Places. And in Case any President, Trustee or Fellow, shall see Cause to change his religious Denomination, the Corporation is hereby empowered to declare his or their Place or Places vacant, and may proceed to fill up it or them accordingly, as before directed, otherwise each Trustee and Fellow, not an Officer of Instruction, shall continue in his Office during Life, or until Resignation. And further, in Case either of the religious Denominations should decline taking a Part in this Catholic, comprehensive and liberal Institution, the Trustees and Fellows shall and may compleat their Number, by electing from their respective Denominations, always preserving their respective Proportions herein before prescribed and determined: And all Elections shall be by Ballot or written Suffrage: And that a Quorum of Four Trustees & Three Fellows may transact any Business, excepting placing the College Edifice, Election of Trustees, President, Fellows and Professors, that is to say, so that their Acts shall be of Force and Validity until the next annual Meeting, and no longer.

Election of President and Professors

Appointment of other officers

Vacancy by change of denomination

Elections by ballot

Minor quorum

And it is further Enacted and Ordained by the Authority aforesaid, That each Trustee and Fellow, as well those nominated in

this Charter, as all that shall hereafter be duly elected, shall, previous to their acting in a corporate Capacity, take the Engagement of Allegiance prescribed by the Law of this Colony, to his Majesty King George the Third, His Heirs and Rightful Successors to the Crown of Great-Britain, which Engagement shall be administered to the present Trustees and Fellows, by the Governor or Deputy-Governor of this Colony, and to those from Time to Time hereafter elected by their respective Moderators, who are hereby empowered to administer the same.‡

Engagement

And still more clearly to define and ascertain the respective Powers of the Two Branches, on making and enacting Laws, It is further Ordained and Declared, That the Fellowship shall have Power, and are hereby empowered from Time to Time, and at all Times hereafter, to make, enact and publish all such Laws, Statutes, Regulations and Ordinances, with Penalties, as to them shall seem meet, for the successful Instruction and Goverment of said College or University, not contrary to the Spirit, Extent, true Meaning and Intention of the Acts of the British Parliament, or the Laws of this Colony; and the same Laws, Statutes and Ordinances to repeal: Which Laws, and the Repeals thereof, shall be laid before the Trustees, and with their Approbation shall be of Force and Validity, but not otherwise. And further the Trustees and Fellows, at their Meetings aforesaid, shall ascertain the Salaries of the respective Officers, and order the Monies assessed on the Students for Tuition, Fines and incidental Expenses, to be collected by the Steward, or such other Officer as they shall appoint to collect the same; and the same with their Revenues, and other College Estates in the Hands of the Treasurer, to appropriate in discharging Salaries and other College Debts: And the College Accounts shall be annually auditted and adjusted in the Meeting of the Corporation.

Laws of the College

Salaries of officers

Audit of accounts

And furthermore, It is hereby Enacted and Declared, That

‡ *September 4, 1782, the Corporation by vote omitted from the engagement the acknowledgment of allegiance to the British crown. The form of engagement has since been modified at various times; the present form is as follows: You* [*person's name*] *being elected a member of this Corporation to the place of* [*Fellow or Trustee*] *do solemnly engage true allegiance to bear to the United States of America, and faithfully to discharge the duties of your present appointment: And this engagement you make and give on the peril of the penalty of perjury.*

into this liberal and catholic Institution shall never be admitted any religious Tests: But on the contrary, all the Members hereof shall forever enjoy full, free, absolute, and uninterrupted Liberty of Conscience: And that the Places of Professors, Tutors, and all other Officers, the President alone excepted, shall be free and open for all Denominations of Protestants: And that Youth of all religious Denominations shall and may be freely admitted to the equal Advantages, Emoluments and Honors of the College or University; and shall receive a like, fair, generous, and equal Treatment during their Residence therein, they conducting themselves peaceably, and conforming to the Laws and Statutes thereof. And that the public Teaching shall, in general, respect the Sciences; and that the Sectarian Differences of Opinions, shall not make any Part of the public and classical Instruction: Although all religious Controversies may be studied freely, examined and explained by the President, Professors, and Tutors, in a personal, separate and distinct Manner, to the Youth of any or each Denomination: And above all, a constant Regard be paid to, and effectual Care taken of, the Morals of the College.

No religious tests

And furthermore, for the Honor and Encouragement of Literature, we Constitute and Declare, the Fellowship aforesaid, a Learned Faculty; and do hereby give, grant unto, and invest them, and their Successors, with full Power and Authority, and they are hereby authorized and empowered, by their President, and in his Absence by the Senior Fellow, or One of the Fellows appointed by themselves at the anniversary Commencement, or at any other Times, and at all Times hereafter, to admit to, and confer any and all the learned Degrees, which can or ought to be given and conferred in any of the Colleges or Universities in America; or any such other Degrees of literary Honor as they shall devise, upon any and all such Candidates and Persons as the President and Fellows, or Fellowship, shall judge worthy of the Academical Honors: Which Power of conferring Degrees is hereby restricted to the learned Faculty, who shall or may issue Diplomas or Certificates of such Degrees, or confer Degrees by Diplomas, and authenticate them with the Public Seal of the Corporation, and the Hands of the President and Secretary, and of all the Professors, as Witnesses, and deliver them to the graduates as honorable and perpetual Testimonies.

Fellows to confer degrees

Diplomas granted

And furthermore, for the greater Encouragement of this Seminary of Learning, and that the same may be amply endowed and enfranchised with the same Privileges, Dignities, and Immunities enjoyed by the American Colleges, and European Universities, We do Grant, Enact, Ordain, and Declare, And it is hereby Granted, Enacted, Ordained, and Declared, That the College Estate, the Estates, Persons, and Families of the President and Professors, for the Time being, lying and being within the Colony, with the Persons of the Tutors and Students, during their Residence at the College, shall be freed and exempted from all Taxes,‡ serving on Juries, and menial Services: And that the Persons aforesaid shall be exempted from

Exemption from taxation, &c.

‡ *February 11, 1863, the Corporation voted as follows:*

WHEREAS the General Assembly of the State of Rhode Island at its present session on the 11th day of February 1863, has passed an Act the principal Section of which is in the following words viz: Section 1. The Corporation of Brown University in Providence consenting hereto that the estates, persons and families of the President and Professors for the time being, and their successors in office, shall not hereafter be freed and exempted from taxes for more than the amount of Ten Thousand dollars for each of such officers, his estates persons and family included.

And Whereas the Institution of Brown University, was established by its founders, was incorporated with liberal franchises by the State, has been maintained solely by private benefactions; all uniting for the same noble object, that is, to create and promote a seminary of religion and learning within this state whose beneficent influences should be diffused, at home and abroad through all time.

And Whereas those influences can, and will be most happily diffused and continued by a cordial good will and a harmonious coöperation between the General Assembly and citizens of this State and the University.

And Whereas the General Assembly by its Act aforesaid has expressed the opinion that the President and Professors should bear a portion of the burdens of taxation from which they are exempted by our charter, and has made the validity of its said Act to depend upon the consent of this Corporation thereto, thereby affirming and maintaining the inviolability of said Charter.

THEREFORE, in order to manifest our cordial compliance with a reasonable wish of the General Assembly as expressed in said Act, It is hereby Voted and declared by the Corporation of Brown University, that being authorized by the President and Professors of said University, this Corporation does in behalf of the President and Professors and in behalf of this Corporation consent to the said Act passed by the General Assembly of the State of Rhode Island at its present session, as aforesaid—and the Secretary of this Corporation is hereby instructed to file a copy of this vote under the seal of the Corporation and certified by himself in the Office of the Secretary of State, as proof of the consent of this Corporation thereto.

The above Report was accepted and the Vote was adopted unanimously.

bearing Arms, Impresses and Military Services, except in case of an Invasion.

And furthermore, for establishing the Perpetuity of this Corporation, and in Case that at any Time hereafter, through Oversight, or otherwise through Misapprehensions, and mistaken Constructions of the Powers, Liberties and Franchises herein contained, any Laws should be enacted, or any Matters done and transacted by this Corporation contrary to the Tenor of this Charter, It is hereby Enacted, Ordained and Declared, That all such Laws, Acts, and Doings, shall be in themselves null and void: Yet, Nevertheless, the same shall not in any Courts of Law, or by the General Assembly, be deemed, taken, interpreted, or adjudged into an Avoidance, Defeazance or Forfeiture of this Charter: But that the same shall be, and remain unhurt, inviolate, and entire unto the said Corporation, in perpetual Succession: Which Corporation may, at all Times, and forever hereafter proceed and continue to act: And all their Acts, conformable to the Powers, Tenor, true Intent and Meaning of the Charter, shall be, and remain in full Force and Validity, the Nullity and Avoidance of any such illegal Acts to the contrary in any wise notwithstanding.

Perpetuity of the Corporation

And lastly, We the Governor and Company aforesaid, Do, for ourselves and our Successors, forever hereby Enact, Grant and Confirm unto the said Trustees and Fellows, and to their Successors, That this Charter of Incorporation, and every Part thereof, shall be good and available in all Things in the Law, according to our true Intent and Meaning: And shall be construed, reputed, and adjudged in all Cases most favorably on the Behalf and for the best Benefit and Behoof of the said Trustees and Fellows, and their Successors, so as most effectually to answer the valuable Ends of this useful Institution.

Charter for the benefit of the Corporation and the College

In full Testimony of which Grant, and of all the Articles and Matters therein contained, the said Governor and Company do hereby order, That this Act shall be signed by the Governor and Secretary, and sealed with the Public Seal of this Colony, and registered in the Colony's Records: And that the same, or an Exemplification thereof, shall be

Signed and sealed

a sufficient Warrant to the said Corporation to hold, use and exercise all the Powers, Franchises, and Immunities herein contained.

In Conformity to the above Act, SAMUEL WARD, ESQ; Governor, Captain-General, and Commander in Chief, of and over the Colony aforesaid doth hereunto subscribe his Name, and hath caused the Seal of said Colony to be affixed the Twenty-fourth Day of October One Thousand Seven Hundred and Sixty-five, and in the Fifth Year of the Reign of his Most Sacred Majesty George the Third by the Grace of God King of Great Britain, &c.

SAM: WARD

By His Honor's Command
EDWD THURSTON jun D: Secry.

ADMISSION TO THE UNIVERSITY

METHODS OF ADMISSION TO THE FRESHMAN CLASS

I. ENTRANCE EXAMINATIONS CONDUCTED BY THE UNIVERSITY. Examinations for admission to the Freshman class are given by the University in September at the times and places indicated below. The University no longer offers entrance examinations in June; candidates desiring to be examined in June must take the examinations conducted under the supervision of the College Entrance Examination Board, for which see pages 42, 43. A candidate may, at his option, take all his examinations in June or in September, or he may take part in June and part in September. Before taking any examination conducted by the University, a candidate must present to the Registrar a letter of recommendation from the principal of his preparatory school and secure a card admitting him to the examination. This may be done by correspondence, provided that the written application and the recommendation are received not less than one week before the date of the first examination.

If a candidate offers subjects in excess of those required for admission, he may be examined in them at the times scheduled below and receive credit for them as college studies.

Any of these examinations may be taken one year before the candidate expects to enter college.

The order of the examinations in 1911 will be as follows:

WEDNESDAY, SEPTEMBER 20

Algebra, 27 Wilson Hall, 8 a.m. to 10 a.m.
Plane Geometry, 27 Wilson Hall, 10 a.m. to 12 m.
Elementary French, 26 Wilson Hall, 1 p.m. to 3 p.m.
Advanced French, 2 Wilson Hall, 3.30 p.m. to 5.30 p.m.

THURSDAY, SEPTEMBER 21

English A, 26 Wilson Hall, 8 a.m. to 9.30 a.m.
English B, 26 Wilson Hall, 9.30 a.m. to 11 a.m.
Elementary Latin, 25 Wilson Hall, 12 m. to 2 p.m.
Advanced Latin, 25 Wilson Hall, 2 p.m. to 3.30 p.m.
American History, 27 Wilson Hall, 4 p.m. to 6 p.m.

FRIDAY, SEPTEMBER 22

Elementary German, 2 Wilson Hall, 8 a.m. to 10 a.m.
Advanced German, 2 Wilson Hall, 10 a.m. to 12 m.
Chemistry, 2 Wilson Hall, 1 p.m. to 3 p.m.

Astronomy, 27 Wilson Hall, 3.15 p.m. to 5.15 p.m.
Physiography, 27 Wilson Hall, 5.30 p.m. to 7.30 p.m.

SATURDAY, SEPTEMBER 23
Plane Trigonometry, 27 Wilson Hall, 8 a.m. to 10 a.m.
Solid Geometry, 27 Wilson Hall, 10 a.m. to 12 m.
Botany, 2 Wilson Hall, 8 a.m. to 10 a.m.
Greek and Roman History, 25 Wilson Hall, 1 p.m. to 3 p.m.
Physics, 1 Wilson Hall, 4 p.m. to 6 p.m.

MONDAY, SEPTEMBER 25
Elementary Greek, 2 Wilson Hall, 8 a.m. to 10 a.m.
Advanced Greek, 2 Wilson Hall, 10 a.m. to 11.30 a.m.
English History, 25 Wilson Hall, 12.30 p.m. to 2.30 p.m.
Medieval and Modern History, 26 Wilson Hall, 3 p.m. to 5 p.m.

For students already pursuing courses in the University, entrance examinations are also given by the University at the close of the Christmas recess. Students desiring to take these examinations must file written applications with the Registrar before December 1. No student who has failed in an entrance examination will be granted a second examination at any time other than September, except on presentation of a tutor's certificate that he is prepared for such examination and on payment of a fee of two dollars. No entrance examinations other than those appointed above will be held unless ordered by vote of the Committee on Registration and Attendance.

II. ENTRANCE EXAMINATIONS CONDUCTED BY THE COLLEGE ENTRANCE EXAMINATION BOARD. Examinations conducted under the supervision of the College Entrance Examination Board will be accepted in place of the corresponding examinations conducted by Brown University. In 1911 these examinations will be held June 19–24.

All applications for these examinations must be addressed to the Secretary of the College Entrance Examination Board, Post Office Sub-Station 84, New York, and must be made upon a blank form to be obtained from the Secretary of the Board. Applications for examination at points in the United States east of the Mississippi River, also at Minneapolis, St. Louis, and other points on the Mississippi River, must be received by the Secretary of the Board on or before Monday, June 5, 1911; application for examination elsewhere in the United States or in Canada must be received on or before Monday, May 29, 1911; and applications for examinations at points outside the United States and Canada must be received on or before Monday, May 15, 1911. Applications received later than the dates named will be accepted when it is possible to arrange for the examinations of the candidates concerned, but only upon the payment of $5 in addition to the regular fee.

The examination fee is $5 for all candidates examined at points in the United States and Canada, and $15 for all candidates examined at points

outside of the United States and Canada. The fee (which cannot be accepted in advance of the application) should be remitted by postal order, express order, or draft on New York, to the order of the College Entrance Examination Board.

A list of the places at which examinations are to be held by the Board in June, 1911, will be published about March 1. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1.

III. ADMISSION BY CERTIFICATE. Students are admitted upon presentation of a certificate signed by the principal of any school which has the privilege of issuing certificates to Brown University.

Principals of schools in New England who desire the certificate privilege for Brown University, or for any other college represented on the New England College Entrance Certificate Board, should address the Secretary of the Board, Professor Nathaniel F. Davis, 159 Brown Street, Providence, R. I., who will furnish the necessary application blanks. These blanks must be returned to him before April 1 of the year for which the certificate privilege is desired.

The principals of schools situated outside of New England who desire the certificate privilege must make application to the Registrar of the University before May 1, and must furnish satisfactory evidence that the course of study in the school meets the requirements for admission. Blank forms for this purpose will be supplied on request. Certificates from the New York Board of Regents are accepted for the specified subjects so far as they coincide with the entrance requirements of Brown University.

Certificates are accepted for admission to the Freshman class only, not for admission to advanced standing. If any candidate offers subjects in excess of those required for admission, he may be examined in them at the times indicated on pages 41, 42, and receive credit for them as college studies.

Blank forms for the certification of candidates may be obtained from the Registrar by the principals of schools having the privilege of certification. These forms should be filled out and returned to him by July 1. When a student has attended more than one school, a letter of recommendation from the principal of the school last attended must accompany the certificate.

ENTRANCE REQUIREMENTS FOR THE VARIOUS DEGREES‡

FOR THE DEGREE OF BACHELOR OF ARTS. In Group I all subjects must be presented. In addition seven points must be presented from Groups II and III. In Group II subjects aggregating at least six points, in-

‡Students entering in 1911 or 1912 have the option of offering the new requirements as described on page 55. After 1912 all candidates for admission must offer the new requirements.

cluding at least three points in ancient languages and at least one point in modern languages, must be presented. In Group III one subject may be presented.

GROUP I. *English;* see pages 45, 46, 47. *Algebra;* see page 47. *Plane Geometry;* see pages 47, 48. *Greek and Roman History;* see page 52.

GROUP II. *Latin* (*elementary and advanced*), *3 points;* see pages 48, 49. *Greek* (*elementary*), *2 points;* see page 49. *Greek* (*advanced*), *1 point;* see page 49. *French* (*elementary*), *1 point;* see pages 49, 50. *French* (*advanced*), *1 point;* see page 50. *German* (*elementary*), *1 point;* see pages 50, 51. *German* (*advanced*), *1 point;* see pages 51, 52.

GROUP III. *Solid Geometry and Plane Trigonometry, 1 point;* see page 48. *Medieval and Modern History, or English History, or American History, 1 point;* see page 52. *Physics, 1 point;* see pages 52, 53. *Chemistry, 1 point;* see page 53.

FOR THE DEGREE OF BACHELOR OF PHILOSOPHY. In Group I all subjects must be presented. In addition, seven points must be presented from Groups II and III. In Group II two or more languages are required, aggregating at least three points. In Group III free selection is allowed to complete the seven points.

GROUP I. *English;* see pages 45, 46, 47. *Algebra;* see page 47. *Plane Geometry;* see pages 47, 48. *Greek and Roman History, or Medieval and Modern History, or English History, or American History;* see page 52.

GROUP II. *Latin* (*elementary*), *2 points;* see page 48. *Latin* (*advanced*), *1 point;* see pages 48, 49. *Greek* (*elementary*), *2 points;* see page 49. *Greek* (*advanced*), *1 point;* see page 49. *French* (*elementary*), *1 point;* see pages 49, 50. *French* (*advanced*), *1 point;* see page 50. *German* (*elementary*), *1 point;* see pages 50, 51. *German* (*advanced*), *1 point;* see pages 51, 52.

GROUP III. *Solid Geometry and Plane Trigonometry, 1 point;* see page 48. *History* (*any one of the four divisions not presented in Group I*), *1 point;* see page 52. *Physics, 1 point;* see pages 52, 53. *Chemistry, 1 point;* see page 53. *Astronomy, 1 point;* see page 53. *Physiography, 1 point;* see pages 53, 54.

FOR THE DEGREE OF BACHELOR OF SCIENCE IN CIVIL ENGINEERING, MECHANICAL ENGINEERING, OR ELECTRICAL ENGINEERING.‡ In Group I all subjects must be presented. In addition, four subjects must be presented from Groups II and III. In Group II at least three subjects must be presented. The fourth subject may be presented from either Group II or Group III.

GROUP I. *English;* see pages 45, 46, 47. *Algebra;* see page 47. *Plane Geometry;* see pages 47, 48. *Solid Geometry;* see page 48. *Greek and Roman History, or*

‡ The Degree of Bachelor of Science is given in Brown University only for engineering courses. The work is mainly technical and offers no freedom of election.

Medieval and Modern History, or English History, or American History; see page 52.

GROUP II. *French (elementary)*; see pages 49, 50. *French (advanced)*; see page 50. *German (elementary)*; see pages 50, 51. *German (advanced)*; see pages 51, 52. *Chemistry;* see page 53.

GROUP III. *Latin (elementary)*; see page 48. *Greek (elementary)*; see page 49. *Physics;* see pages 52, 53. *History (any one of the four divisions not presented in Group I)*; see page 52. *Astronomy;* see page 53. *Physiography;* see pages 53, 54. *Botany;* see page 54.

Applicants for admission who have had extensive training in freehand drawing, and who, by presentation of properly certified plates to the Committee on Registration and Attendance give evidence of exceptional ability in this work, may offer freehand drawing in place of any one of the subjects in Group III.

ENTRANCE REQUIREMENTS IN THE SEVERAL SUBJECTS

I. ENGLISH. Preparation in English has two main objects: (1) command of correct and clear English, spoken and written: (2) ability to read with accuracy, intelligence, and appreciation. As training which will further these two ends, the candidate is required to pursue work in English grammar and composition, and to read a certain number of prescribed books.

The grammatical knowledge expected of the candidate includes simple grammatical terminology, inflections, and syntax. He should be able to spell, punctuate, and capitalize correctly, to use words properly, and to write clear and correct sentences and coherent paragraphs. In general this requires a review of grammar in the secondary school, regular practice in oral and written composition under criticism from the teacher throughout the four years of the secondary school course, and the coöperation of teachers of other subjects in the effort to secure good English in all recitations and written exercises.

The prescribed reading is divided into two parts: (1) books for reading; (2) books for study. The books in the first part the candidate should read carefully enough to grasp their meaning and to answer simple questions upon their content and style; but he should not pay such attention to details that the reading becomes a task. The books in the second part are to be treated with more attention to details of substance and form. The candidate should be able to explain the exact meaning of words, phrases, and allusions of which a definite knowledge is essential to understanding the text; to give a sensible, untechnical criticism of the structure and style; and to know such facts about the authorship, origin, and purpose of the works read as may be necessary to real understanding of them. He should also have a knowledge, definite but not highly detailed, of the lives of the authors of the books prescribed for study

and of their place in literary history. Reading aloud, under criticism from the teacher, and the memorizing of some notable passages in prose and verse, are recommended. The candidate is also urged to do as much additional reading as possible; certified lists of such reading may be submitted as part of the evidence of the candidate's fitness.

The examination is divided into two parts, which may be taken at different times. The first part covers the work in grammar and composition and the books prescribed for reading. It includes (1) questions upon grammar and usage; (2) questions upon the substance and style of the books prescribed for reading; (3) a brief composition on some topic assigned, usually a topic not connected with the prescribed reading. The second part of the examination is devoted to the books prescribed for study. It includes (1) questions upon the content, structure, and style of these books; (2) questions upon the authors' lives and their place in literary history.

The requirement of the College Entrance Examination Board in English is accepted as an equivalent of the requirement in English. Candidates who have credit for only part *a* of the Board examination must take part *b* of the Brown University examination, and also answer the questions upon grammar and usage in part *a* of the Brown University examination; those who have credit for only part *b* of the Board examination must take part *a* of the Brown University examination.

The books prescribed for reading are as follows:

For Students entering in 1911:‡ Shakspere's *Merchant of Venice* and *Julius Caesar; The Sir Roger de Coverley Papers* in *The Spectator;* Franklin's *Autobiography;* Scott's *Lady of the Lake* and *Ivanhoe;* Hawthorne's *House of the Seven Gables;* Macaulay's *Lays of Ancient Rome;* Tennyson's *Gareth and Lynette, Lancelot and Elaine,* and *The Passing of Arthur;* Dickens's *Tale of Two Cities.*

For Students entering in 1912:‡ Shakspere's *As You Like It* and *Julius Caesar;* Franklin's *Autobiography;* Goldsmith's *Deserted Village;* Dickens's *Tale of Two Cities;* George Eliot's *Silas Marner;* Irving's *Sketch Book;* Scott's *Lady of the Lake;* Byron's *Mazeppa* and *The Prisoner of Chillon;* Macaulay's *Lays of Ancient Rome.*

For Students entering in 1913, 1914, and 1915, see lists on pages 56, 57.

The books prescribed for study are as follows:

For Students entering in 1911: Shakspere's *Macbeth;* Milton's *L'Allegro, Il Penseroso, Comus,* and *Lycidas;* Burke's *Speech on Conciliation with Amer-*

‡ The lists for the classes entering in 1911 and 1912 are selected from the list adopted by the Conference on Uniform Entrance Requirements in English. Candidates may present other selections from that list, provided they notify the Registrar, on or before the first day of August preceding the examination, of the substitutions they wish to make.

ica, or Washington's *Farewell Address* and Webster's *First Bunker Hill Oration;* Macaulay's *Life of Johnson* or Carlyle's *Essay on Burns.*

For Students entering in 1912: Shakspere's *Macbeth;* Milton's *Comus*, *L'Allegro*, and *Il Penseroso*, or Tennyson's *Gareth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur;* Burke's *Speech on Conciliation with America*, or Washington's *Farewell Address* and Webster's *First Bunker Hill Oration;* Macaulay's *Life of Johnson* or Carlyle's *Essay on Burns.*

For Students entering in 1913, 1914, and 1915, see list on pages 56, 57.

II. ALGEBRA.‡ The requirement in Algebra covers the work through equations of the second degree, including the following subjects: the four fundamental operations for rational algebraic expressions; factoring, determination of highest common factor and lowest common multiple by factoring; fractions, including complex fractions, and ratio and proportion; linear equations, both numerical and literal, containing one or more unknown quantities; problems depending on linear equations; radicals, including the extraction of the square root of polynomials and of numbers; exponents, including the fractional and negative; quadratic equations, both numerical and literal; simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations; the binomial theorem for positive integral exponents: the formulae for the nth term and the sum of terms of arithmetical and geometric progressions, with applications.

It is assumed that pupils will be required throughout the course to solve numerous problems which involve putting questions into equations. Some of these problems should be chosen from mensuration, from physics, and from commercial life. The use of graphical methods and illustrations, particularly in connection with the solution of equations, is also expected.

This requirement is that of the College Entrance Examination Board in Mathematics *a* (i and ii).

III. PLANE GEOMETRY.‡ The requirement in Plane Geometry includes the usual theorems and constructions of good text-books, including the general properties of plane rectilinear figures; the circle and the measurement of angles; similar polygons; areas; regular polygons and the measurement of the circle; the solution of numerous original exercises, including loci problems; applications to the mensuration of lines and plane surfaces.

Teachers of Geometry should lay stress on accuracy of statement and ele-

‡ Although candidates are not examined in Arithmetic, a knowledge of its fundamental principles and a careful training in accurate computation with whole numbers and with vulgar and decimal fractions are regarded as essential parts of a preparatory course.

The school curriculum should be so arranged that no term shall pass without some time being given to a mathematical subject, and that both Algebra and Geometry shall be taken either in review or in advance during the last year of the course. For a four-year course an average of two and one half hours a week should be given to mathematics.

gance of form as well as on clear and strict reasoning. Mere memorizing should be avoided. Special care should be taken that in the proof of a proposition no lines be drawn unless their construction is proved to be possible.

This requirement is that of the College Entrance Examination Board in Mathematics *c*.

IV. SOLID GEOMETRY. The requirement in solid Geometry covers the usual theorems and constructions of good text-books, including the relations of planes and lines in space; the properties and measurement of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle; the solution of numerous original exercises, including loci problems; applications to the mensuration of surfaces and solids.

This requirement is that of the College Entrance Examination Board in Mathematics *d*.

V. PLANE TRIGONOMETRY. The requirement in Plane Trigonometry includes definitions and relations of the six trigonometric functions as ratios; circular measurement of angles; proofs of principal formulae, in particular for the sine, cosine, and tangent of the sum and difference of two angles, of the double angle and half angle, the product expressions for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulae; the solution of trigonometric equations of a simple character; the theory and use of logarithms (without the introduction of work involving infinite series); the solution of right and oblique triangles; practical applications.

This requirement is that of the College Entrance Examination Board in Mathematics *f*.

VI. ELEMENTARY LATIN. The requirement in Elementary Latin includes: (1) Caesar's *Gallic War*, Books I-IV, or Books I-III and Sallust's *Catiline*, with questions on the forms, the constructions, and the subject-matter; (2) Cicero's *Orations against Catiline* and *Oration for Archias*, with questions on the grammar and the subject-matter; (3) Ovid, twenty-five hundred lines, with questions on the subject-matter and prosody; an equivalent amount of prose or poetry (preferably poetry) will be accepted in place of the requirement in Ovid; (4) translation at sight of passages from Caesar and Cicero, with questions on the ordinary forms and constructions; (5) translation into Latin of simple English sentences.

The requirement of the College Entrance Examination Board in Latin *a* (i and ii), *b*, *c*, *g*, and *m* is accepted as an equivalent of the requirement in Elementary Latin.

VII. ADVANCED LATIN. The requirement in Advanced Latin includes: (1) Vergil's *Aeneid*, Books I-VI, or Books I-V and the *Eclogues*, with questions on the constructions, the subject-matter, and prosody; (2) translation at sight

of prose and verse, with questions on the constructions, the subject-matter, and prosody; (3) translation into Latin of a continuous passage of English narrative prepared from some portion of the prescribed prose.

The requirement of the College Entrance Examination Board in Latin *d*, *l*, *p*, and *q* is accepted as an equivalent of the requirement in Advanced Latin.

VIII. ELEMENTARY GREEK. The requirement in Elementary Greek includes: (1) Xenophon's *Anabasis*, Books I-IV, with attention not only to language, but to subject-matter as well; (2) grammar, including a familiar knowledge of inflection, word-formation, and ordinary syntax. This will be tested by: (*a*) questions upon a passage from the *Anabasis;* (*b*) translation into Greek, with accents, of simple English sentences.

The requirement of the College Entrance Examination Board in Greek *a* (i and ii) and *b* is accepted as an equivalent of the requirement in Elementary Greek.

IX. ADVANCED GREEK. The requirement in Advanced Greek includes: (1) three books of Homer's *Iliad* or *Odyssey* with questions upon meter, Homeric dialect, etc., or (upon request four weeks in advance of the examination) an equivalent amount of a prose author; (2) translation at sight of simple Attic prose or Homer; (3) translation into Greek, with accents, of a continuous passage of English narrative, based upon material similar to the *Anabasis*.

The requirement of the College Entrance Examination Board in Greek *c*, *f*, *g*, and *h* is accepted as an equivalent of the requirement in Advanced Greek.

X. ELEMENTARY FRENCH. Candidates presenting Elementary French should be able to pronounce French accurately, to read at sight easy French prose, to put into French simple English sentences taken from the language of every-day life or based upon a portion of the French text read, and to answer questions upon the rudiments of grammar.

The work of preparation should include: (1) careful drill in pronunciation; (2) the rudiments of grammar, including the inflection of the regular and more common irregular verbs, plural nouns, adjectives, participles, and pronouns; the partitive constructions; the order of words in the sentence, and the elementary rules of syntax, including the simpler uses of the conditional and the subjunctive; (3) abundant easy exercises, designed not only to fix in the memory the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; (4) the reading of from 250 to 400 duodecimo pages of easy modern prose in the form of stories, plays, or historical or biographical sketches, with constant practice in translating into French easy variations upon the texts read. Suitable elementary texts are: Daudet's easier short stories, Erckmann-Chatrian's stories, Enault's *Le chien du capitaine*, Foa's *Contes biographiques* and *Le petit Robinson*, Labiche and Martin's *La poudre aux yeux* and *Le voyage de M. Perrichon*, Laurie's *Mémoires*

d'un collégien, Féval's *La fée des grèves*, Mérimée's *Colomba*, extracts from Michelet, Sarcey's *Siège de Paris*, Verne's stories.

The requirement of the College Entrance Examination Board in French *a* is accepted as an equivalent of the requirement in Elementary French.

XI. ADVANCED FRENCH. Candidates presenting Advanced French should be able to read at sight ordinary French prose or simple poetry, to translate into French a connected passage of English based on the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

The work should include the reading of from 250 to 400 pages (in addition to the amount read for the elementary requirement) of French of ordinary difficulty, of which a portion should be in the dramatic form; constant practice in giving French paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation. Suitable texts are: About's stories, Augier and Sandeau's *Le gendre de M. Poirier*, Béranger's poems, Daudet's *La Belle-Nivernaise*, La Brète's *Mon oncle et mon curé*, Madame de Sévigné's letters, Anatole France's *Le crime de Sylvestre Bonnard* and *Le livre de mon ami*, Pailleron's *Le monde où l'on s'ennuie*, Hugo's *La chute*, Loti's *Pêcheur d'Islande*, Sandeau's *Mademoiselle de la Seiglière*, Thiers's *L'expédition de Bonaparte en Egypte*, de Vigny's *La canne de jonc*, Coppée's poems, de Maupassant's stories.

The requirement of the College Entrance Examination Board in French *b* is accepted as an equivalent of the requirement in Advanced French.

XII. ELEMENTARY GERMAN. Candidates presenting Elementary German should be able to read at sight and to translate a passage of very easy dialogue or narrative prose, help being given upon unusual words and constructions; to put into German short English sentences taken from the language of every-day life or based upon the text given for translation; and to answer questions upon the rudiments of the grammar.

Two years should be given to preparation in this subject. During the first year the work should include: (1) careful drill upon pronunciation; (2) the memorizing and frequent repetition of easy colloquial sentences; (3) drill upon the rudiments of grammar, including the inflection of the articles, of such nouns as belong to the language of every-day life, of adjectives, pronouns, weak verbs, and the more common strong and irregular verbs; also upon the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word-order; (4) easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in the oral and written reproduction of ordinary forms of expression; (5) the reading of about 75 pages of graduated texts from a reader, with constant practice in translating into German easy variations upon sentences selected from the reading lesson and in the reproduction from memory

of sentences previously read; (6) the ability to understand and reproduce at hearing simple German prose.

During the second year the work should include: (1) the reading of about 125 pages of literature in the form of easy stories and plays; (2) practice in the translation into German of easy variations upon the matter read and in the reproduction, sometimes orally and sometimes in writing, of the substance of short and easy selected passages; (3) continued drill upon the rudiments of the grammar with special emphasis on the declension of adjectives and on word-order, directed to the ends of enabling the pupil to use his knowledge with facility in simple written and oral expression. A part of all entrance examinations in German will be devoted to an oral test.

Stories suitable for the second year of the elementary course can be selected from the following list: Andersen's *Märchen* and *Bilderbuch ohne Bilder;* Arnold's *Fritz auf Ferien;* Baumbach's *Der Fiedelbogen des Neck* and *Der Schwiegersohn;* Gerstäcker's *Germelshausen;* Heyse's *L'Arrabbiata, Das Mädchen von Treppi* and *Anfang und Ende;* Hillern's *Höher als die Kirche;* Jensen's *Die braune Erica;* Leander's *Träumereien* and *Kleine Geschichten;* Seidel's *Märchen;* Stökl's *Unter dem Christbaum;* Storm's *In St. Jürgen* and *Geschichten aus der Tonne.* Among the available plays are Benedix's *Der Prozess, Der Weiberfeind,* and *Günstige Vorzeichen;* Fulda's *Unter vier Augen;* Wichert's *An der Majorsecke;* Wilhelmi's *Einer muss heiraten.* It is recommended, however, that not more than one play be read; the narrative style should predominate. A satisfactory selection would be: about forty pages of Andersen's *Märchen* or *Bilderbuch,* or Leander's *Träumereien,* or *Höher als die Kirche;* a story by Heyse, Baumbach, Storm, or Seidel; and *Der Prozess.*

The requirement of the College Entrance Examination Board in German *a* is accepted as an equivalent of the requirement in Elementary German.

XIII. ADVANCED GERMAN. Candidates presenting Advanced German should be able to read at sight German prose of ordinary difficulty, whether modern or classical; to put into German a connected passage of simple English paraphrased from a given text in German; to answer any grammatical questions relating to the usual forms and essential principles of the language, including syntax and word-formation, and to translate and explain (so far as explanation may be necessary) a passage of classical or modern literature taken from some text previously studied; to understand and reproduce at hearing fairly difficult German prose.

The work should include, in addition to the elementary course, the reading of about 300 pages of moderately difficult prose and poetry, with constant practice in giving, sometimes orally and sometimes in writing, paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; also grammatical drill upon the less usual strong verbs, the use of articles, cases, auxiliaries of all kinds, tenses and modes (with special reference to the infinitive and the subjunctive), and word-order and word-formation.

Suitable reading matter can be selected from such works as the following: Ebner-Eschenbach's *Die Freiherren von Gemperlein;* Freytag's *Bilder aus der deutschen Vergangenheit,* —for example, *Karl der Grosse, Aus den Kreuzzügen, Doktor Luther, Aus dem Staat Friedrichs des Grossen;* Fouqué's *Undine;* Goethe's *Hermann und Dorothea* and *Egmont;* Heine's poems and *Reisebilder;* Lessing's *Minna von Barnhelm;* Meyer's *Der Heilige;* Moser's *Der Bibliothekar;* Riehl's *Novellen,* —for example, *Burg Neideck, Der Fluch der Schönheit, Der stumme Ratsherr, Das Spielmannskind;* Rosegger's *Waldheimat;* Schiller's *Wilhelm Tell, Die Jungfrau von Orleans, Das Lied von der Glocke, Balladen;* Uhland's poems; Wildenbruch's *Das edle Blut;* Keller's *Romeo and Julia auf dem Dorfe;* Liliencron's *Anno 1870;* Fulda's *Der Talisman;* Grillparzer's *Sappho.*

The requirement of the College Entrance Examination Board in German *b* is accepted as an equivalent of the requirement in Advanced German.

XIV. HISTORY. The requirement in any of the historical fields named below demands such knowledge as may be acquired from the study of a good modern text-book of not less than 300 pages, supplemented by not less than 300 pages of suitable parallel reading. Questions on historical geography will be included in the examination. For preparation in either 1, 2, 3, or 4, a course of study equivalent to at least three lessons a week for one year is necessary.

No candidate will be allowed to present more than two of the four divisions.

1. Greek and Roman history: (*a*) Greek history to the death of Alexander, with due reference to Greek life, literature, and art; (*b*) Roman history to the end of the reign of Marcus Aurelius, with due reference to literature and government.

2. Medieval and Modern European history from the time of the barbarian invasions to the present.

3. English history, with due reference to political and social development and to international relations.

4. American history, including the elements of Civil Government.

The requirements of the College Entrance Examination Board in History are accepted as equivalents of the requirements in History.

XV. PHYSICS. The candidate's preparation in Physics should include (1) the study of at least one standard text-book, supplemented by the use of many and varied numerical problems, to the end that a pupil may gain a comprehensive and connected view of the most important facts and laws in elementary physics; (2) instruction, by lecture-table demonstrations, upon the general principles involved in the pupil's laboratory investigations; (3) individual laboratory work comprising at least thirty-five exercises. Every candidate must present as a part of the examination, a note-book, certified by the teacher, containing in the candidate's own language a description of his laboratory exercises, with a careful record of the steps, observations, and results of each

exercise. The note-book must afford clear evidence of the pupil's ability to make accurate observations and to draw direct conclusions.

Students who offer Physics for entrance will be permitted to enter the more advanced courses if, on consultation with the officers of the department, they are found to have the requisite qualifications.

The requirement of the College Entrance Examination Board in Physics is accepted as an equivalent of the requirement in Physics.

XVI. CHEMISTRY. ‡ The requirement in Chemistry includes a knowledge of the more important non-metals and their principal combinations, about ten important metals and their principal salts, the more important topics of chemical philosophy, chemical nomenclature and notation, and the ordinary methods of stoichiometry. Candidates should have personally performed about one hundred simple experiments (those in Appleton's *Young Chemist* are mentioned as illustrations, but equivalents will be accepted). Every candidate must present, as a part of the examination, a note-book, certified by the teacher, containing in the candidate's own language a description of his laboratory exercises with a careful record of the steps, observations, and results of each exercise. A course accomplishing the preparation above outlined will require an amount of time equivalent to three hours a week for one school year.

The requirement of the College Entrance Examination Board in Chemistry is accepted as an equivalent of the requirement in Chemistry.

XVII. ASTRONOMY. The requirement in Astronomy demands class instruction for the equivalent of three hours a week for a school year in the elementary principles of the science, including observations of the heavens with reference to the positions and movements of the heavenly bodies. The following are the chief topics to be studied: *The Celestial Sphere;* designation of the directions of a heavenly body. *The Earth;* its axial rotation; time, latitude, longitude; its orbital revolution; precession; aberration, the seasons, equation of time, the calendar. *The Moon;* its axial rotation, orbital motion, librations, phases, surface features, physical condition; lunar and solar eclipses. *The Sun;* its rotation, physical characteristics, light, and heat. *The Planets;* apparent and real motions, individual characteristics. *The Law of Gravitation;* its control of the solar system; the tides. *Comets and Meteors;* their nature and motions. *The Stars;* designation, classification by constellations, motions, distance, brightness, variables. *Stellar Systems;* clusters, nebulae; the stellar universe, cosmogony.

As no examination in Astronomy is given by the College Entrance Examination Board, the examination in this subject must be taken in September at Brown University; see pages 41, 42.

XVIII. PHYSIOGRAPHY. The requirement in Physiography demands a thorough knowledge of the elementary principles as found in a standard text-

‡ For admission to Chemistry 4, 5, 6, see page 100.

book. The equivalent of a year's work of three hours a week is expected. The work should include the study of oceans, atmosphere, climate, weather, rivers; of land forms, their geographical distribution and classification, their origin, growth, and decay; and some study of the interrelation of man and nature. Properly attested reports of field and laboratory work will be received and credited if submitted at the time of examination.

The requirement of the College Entrance Examination Board in Geography is accepted as an equivalent of the requirement in Physiography.

XIX. BOTANY. The requirement in Botany demands an amount of work equivalent to that outlined in the "briefer course" in Bergen and Davis's *Laboratory and Field Manual of Botany* and *Principles of Botany*, or to that indicated in Bergen's *Elements of Botany*, or Bergen's *Essentials of Botany*. A certified statement of the laboratory notes and drawings made in connection with the course must be submitted at the time of the examination.

The requirement of the College Entrance Examination Board in Botany is accepted as an equivalent of the requirement in Botany.

NEW ENTRANCE REQUIREMENTS FOR THE VARIOUS DEGREES

FOR THE DEGREE OF BACHELOR OF ARTS OR BACHELOR OF PHILOSOPHY. Candidates must present fourteen and one-half units from the subjects described on pages 55–68. ‡ Not more than two units may be offered in History without special permission from the Committee on Registration and Attendance. If Latin is presented, it must be for at least three units (see page 60); if Greek, for at least two units (see page 61). Solid Geometry and Plane Trigonometry must be presented together. A substitute for an optional subject may be accepted if the Committee is convinced that it is a full equivalent.

Candidates for the degree of Bachelor of Arts must present English, Algebra, Plane Geometry, Greek and Roman History, and eight units in addition, seven of which must be in languages other than English, and must include the elementary and advanced requirements in at least one ancient language.

Candidates for the degree of Bachelor of Philosophy must present English, Algebra, Plane Geometry, one unit in History, and eight units in addition, of which five must be in languages other than English, and must include one modern language.

FOR THE DEGREE OF BACHELOR OF SCIENCE. Candidates must present twelve units from the subjects described on pages 55–68. These must include English, Algebra, Plane Geometry, Solid Geometry, one unit in History, and five units in addition, three of which must be in French, German, or Chemistry, or in any two of them.

By special permission of the Committee on Registration and Attendance other subjects, not included in the list, may be presented for two units.

‡ Botany and the two-year requirement in Latin are for candidates for the degree of Bachelor of Science only. See pages 61, 67.

NEW ENTRANCE REQUIREMENTS

STUDENTS entering in 1911 or 1912 may offer either the old or the new requirements. After 1912 the new requirements only will be accepted.

Units of Entrance Requirements

A unit represents a year's study in any subject in a secondary school constituting approximately a quarter of a full year's work.

This statement is designed to afford a standard of measurement for the work done in secondary schools. It takes the four-year high school course as a basis, and assumes that the length of the school year is from thirty-six to forty weeks, that a period is from forty to sixty minutes in length, and that the study is pursued for four or five periods a week; but under ordinary circumstances, a satisfactory year's work in any subject cannot be accomplished in less than one hundred and twenty sixty-minute periods or their equivalent. Schools organized on any other than a four-year basis can, nevertheless, estimate their work in terms of this unit.

The scale of values of admission requirements in terms of units is as follows, and is identical with that adopted by the College Entrance Examination Board:

	Units		*Units*
English *a*	2	French *a*	2
b	1	*b*	1
History *a*, *b*, *c*, and *d*, each	1	German *a*	2
Latin *a* (i)	½	*b*	1
a (ii)	½	Algebra *a* (i and ii)	1½
b	1	Plane Geometry	1
bf	1	Solid Geometry	½
c, *m*	1	Plane Trigonometry	½
d, *q*	1	Physics	1
Greek *a* (i and ii)	1	Chemistry	1
bg	1	Botany	1
c, *f*, *h*	1	Physiography	1

ENGLISH. *Three units.* Preparation in English has two main objects: (1) command of correct and clear English, spoken and written; (2) ability to read with accuracy, intelligence, and appreciation.

Grammar and Composition. The first object requires instruction in grammar and composition. English grammar should ordinarily be reviewed in the secondary school; and correct spelling and grammatical accuracy should be rigorously exacted in connection with all written work during the four years. The principles of English composition governing punctuation, the use of words, paragraphs, and the whole composition should be carefully studied;

‡In place of these units in Latin the new Board valuations (August 31, 1910) will be accepted as follows: *N R 1*, *2*, *4*, three units; *N R 5*, one unit; *N R 3*, two units.

and practice in composition, oral as well as written, should extend throughout the secondary school period. Written exercises may well comprise narration, description, and easy exposition and argument based upon simple outlines. It is advisable that subjects for this work be taken from the student's personal experience, general knowledge, and studies other than English, as well as from his reading in literature. Finally, special instruction in language and composition should be accompanied by concerted effort of teachers in all branches to cultivate in the student the habit of using good English in his recitations and various exercises, whether oral or written.

Literature. In the pursuit of the second object the student is required to read certain books chosen from two lists, headed respectively *Reading* and *Study*. In connection with both lists the student should be trained in reading aloud, and should be encouraged to commit to memory some of the more notable passages both in verse and in prose.

a. Reading

The aim of this part of the requirement is to foster in the student the habit of intelligent reading and to develop a taste for good literature. He should read the books carefully, but his attention should not be so fixed upon details that he fails to appreciate the main purpose and the charm of what he reads.

The books prescribed for reading are as follows:

For Students entering in 1911: Shakspere's *Merchant of Venice* and *Julius Caesar; The Sir Roger de Coverley Papers* in *The Spectator;* Franklin's *Autobiography;* Scott's *Lady of the Lake* and *Ivanhoe;* Hawthorne's *House of the Seven Gables;* Macaulay's *Lays of Ancient Rome;* Tennyson's *Gareth and Lynette, Lancelot and Elaine,* and *The Passing of Arthur;* Dickens's *Tale of Two Cities.*

For Students entering in 1912: Shakspere's *As You Like It* and *Julius Caesar;* Franklin's *Autobiography;* Goldsmith's *Deserted Village;* Dickens's *Tale of Two Cities;* George Eliot's *Silas Marner;* Irving's *Sketch Book;* Scott's *Lady of the Lake;* Byron's *Mazeppa* and *The Prisoner of Chillon;* Macaulay's *Lays of Ancient Rome.*

For Students entering in 1913, 1914, and 1915, the books are arranged in the following groups, from which at least ten units are to be selected, two from each group:

1. The *Old Testament*, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the *Odyssey*, with the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII; the *Iliad*, with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI; Vergil's *Aeneid*. The *Odyssey*,

Iliad, and *Aeneid* should be read in English translations of recognized literary excellence.

For any unit of this group a unit from any other group may be substituted.

2. Shakspere's *Merchant of Venice; Midsummer Night's Dream; As You Like It; Twelfth Night; Henry the Fifth; Julius Caesar.*

3. Defoe's *Robinson Crusoe*, Part 1; Goldsmith's *Vicar of Wakefield;* Scott's *Ivanhoe* or *Quentin Durward;* Hawthorne's *House of the Seven Gables;* Dickens's *David Copperfield* or *Tale of Two Cities;* Thackeray's *Henry Esmond;* Mrs. Gaskell's *Cranford;* George Eliot's *Silas Marner;* Stevenson's *Treasure Island.*

4. Bunyan's *Pilgrim's Progress*, Part 1; *The Sir Roger de Coverley Papers* in *The Spectator;* Franklin's *Autobiography* (condensed); Irving's *Sketch Book;* Macaulay's *Essays on Lord Clive* and *Warren Hastings;* Thackeray's *English Humourists; Selections* from Lincoln, including at least the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, and the Letter to Horace Greeley, along with a brief memoir or estimate; Parkman's *Oregon Trail;* either Thoreau's *Walden*, or Huxley's *Autobiography* and selections from *Lay Sermons*, including the addresses on Improving Natural Knowledge, A Liberal Education, and A Piece of Chalk; Stevenson's *Inland Voyage* and *Travels with a Donkey.*

5. Palgrave's *Golden Treasury* (First Series), Books II and III, with special attention to Dryden, Collins, Gray, Cowper, and Burns; Gray's *Elegy in a Country Churchyard* and Goldsmith's *Deserted Village;* Coleridge's *Ancient Mariner* and Lowell's *Vision of Sir Launfal;* Scott's *Lady of the Lake;* Byron's *Childe Harold*, Canto IV, and *Prisoner of Chillon;* Palgrave's *Golden Treasury* (First Series), Book IV, with especial attention to Wordsworth, Keats, and Shelley; Poe's *Raven*, Longfellow's *Courtship of Miles Standish*, and Whittier's *Snow-Bound;* Macaulay's *Lays of Ancient Rome* and Arnold's *Sohrab and Rustum;* Tennyson's *Gareth and Lynette*, *Lancelot and Elaine*, and *The Passing of Arthur;* Browning's *Cavalier Tunes*, *The Lost Leader*, *How They Brought the Good News from Ghent to Aix*, *Home Thoughts from Abroad*, *Home Thoughts from the Sea*, *Incident of the French Camp*, *Hervé Riel*, *Pheidippides*, *My Last Duchess*, *Up at a Villa—Down in the City.*

b. Study

This part of the requirement is intended as a natural and logical continuation of the student's earlier reading. Greater stress is laid upon form and style, the exact meaning of words and phrases, and the understanding of allusions. For this close reading are provided a play, a group of poems, an oration, and an essay, as follows:

For Students entering in 1911: Shakspere's *Macbeth;* Milton's *L'Allegro, Il Penseroso, Comus,* and *Lycidas;* Burke's *Speech on Conciliation with America,* or Washington's *Farewell Address* and Webster's *First Bunker Hill Oration;* Macaulay's *Life of Johnson,* or Carlyle's *Essay on Burns.*

For Students entering in 1912: Shakspere's *Macbeth;* Milton's *L'Allegro, Il Penseroso,* and *Comus,* or Tennyson's *Gareth and Lynette, Lancelot and Elaine,* and *The Passing of Arthur;* Burke's *Speech on Conciliation with America,* or Washington's *Farewell Address* and Webster's *First Bunker Hill Oration;* Macaulay's *Life of Johnson,* or Carlyle's *Essay on Burns.*

For Students entering in 1913, 1914, and 1915: Shakspere's *Macbeth;* Milton's *L'Allegro, Il Penseroso,* and *Comus;* Burke's *Speech on Conciliation with America,* or Washington's *Farewell Address* and Webster's *First Bunker Hill Oration;* Macaulay's *Life of Johnson,* or Carlyle's *Essay on Burns.*

Examination. However accurate in subject-matter, no paper will be considered satisfactory if seriously defective in punctuation, spelling, or other essentials of good usage.

The examination will be divided into two parts, the first of which (value, two units) may be taken as a preliminary, the second (value, one unit) as a final.

The first part of the examination will be upon ten units chosen, in accordance with the plan described earlier, from the lists headed *Reading;* and it will include also questions upon grammar and the simpler principles of rhetoric, and a short composition upon some topic drawn from the student's general knowledge or experience. On the books prescribed for reading, the examination will usually consist of the writing of short paragraphs on several topics which the candidate may choose out of a considerable number. These topics will involve such knowledge and appreciation of plot, character-development, and other qualities of style and treatment as may be fairly expected of boys and girls. In grammar and rhetoric, the candidate will be asked specific questions upon the practical essentials of these studies, such as the relation of the various parts of a sentence to one another, the construction of individual words in a sentence of reasonable difficulty, and those good usages of modern English which one should know in distinction from current errors.

The second part of the examination will be upon the books prescribed for study. It will consist of questions upon their content, form, and structure, and upon the meaning of such words, phrases, and allusions as may be necessary to an understanding of the works and an appreciation of their salient qualities of style. General questions may also be asked concerning the lives of the authors, their other works, and the periods of literary history to which they belong.

The requirement is the same as that of the College Entrance Examination Board in English except with respect to the division of the examination. Candidates in 1911 and 1912 who have credit for only part *a* of the Board examination must take part *b* of the Brown University examination, and also answer the questions upon grammar and usage in part *a* of the Brown University examination; those who have credit for only part *b* of the Board examination must take part *a* of the Brown University examination. After 1912, the Brown University requirement and the Board requirement will be identical.

MATHEMATICS. Algebra. *One and one-half units.* The requirement in Algebra covers the work through equations of the second degree, including the following subjects: the four fundamental operations for rational algebraic expressions; factoring, determination of highest common factor and lowest common multiple by factoring; fractions, including complex fractions, and ratio and proportion; linear equations, both numerical and literal, containing one or more unknown quantities; problems depending on linear equations; radicals, including the extraction of the square root of polynomials and of numbers; exponents, including the fractional and negative; quadratic equations, both numerical and literal; simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations; the binomial theorem for positive integral exponents; the formulae for the *n*th term, and the sum of the terms, of arithmetical and geometric progressions, with applications.

It is assumed that pupils will be required throughout the course to solve numerous problems which involve putting questions into equations. Some of these problems should be chosen from mensuration, from physics, and from commercial life. The use of graphical methods and illustrations, particularly in connection with the solution of equations, is also expected.

This requirement is the same as that of the College Entrance Examination Board in Mathematics *a* (i and ii).

Plane Geometry. *One unit.* The requirement in Plane Geometry includes the usual theorems and constructions of good text-books, including the general properties of plane rectilinear figures; the circle and the measurement of angles; similar polygons; areas; regular polygons and the measurement of the circle; the solution of numerous original exercises, including loci problems; applications to the mensuration of lines and plane surfaces.

Teachers of Geometry should lay stress on accuracy of statement and elegance of form as well as on clear and strict reasoning. Mere memorizing should be avoided. Special care should be taken that in the proof of a proposition no lines be drawn unless their construction is proved to be possible.

This requirement is the same as that of the College Entrance Examination Board in Mathematics *c*.

Solid Geometry. *One-half unit.* The requirement in Solid Geometry covers the usual theorems and constructions of good text-books, including the relations of planes and lines in space; the properties and measurement of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle; the solution of numerous original exercises, including loci problems; applications to the mensuration of surfaces and solids.

This requirement is the same as that of the College Entrance Examination Board in Mathematics *d*.

Plane Trigonometry. *One-half unit.* The requirement in Plane Trigonometry includes definitions and relations of the six trigonometric functions as ratios; circular measurement of angles; proofs of principal formulae, in particular for the sine, cosine, and tangent of the sum and difference of two angles, of the double angle and half angle, the product expressions for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulae; the solution of trigonometric equations of a simple character; the theory and use of logarithms (without the introduction of work involving infinite series); the solution of right and oblique triangles; practical applications.

This requirement is the same as that of the College Entrance Examination Board in Mathematics *f*.

LATIN. Elementary Latin. *Three units.* The Latin reading without the prescription of particular authors and works shall not be less in amount than Caesar, *Gallic War*, I-IV; Cicero, the orations against Catiline, for the Manilian Law, and for Archias. The reading shall be selected from the following authors and works: Caesar (*Gallic War* and *Civil War*) and Nepos (*Lives*); Cicero (orations, letters, and *De Senectute*) and Sallust (*Catiline* and *Jugurthine War*).

Candidates will be examined in translation at sight of passages from Caesar and Cicero. The vocabulary, constructions, and range of ideas of the passages set will be suited to the preparation secured by the reading indicated above. They will be examined also upon the following prescribed reading: Cicero, orations for the Manilian Law and for Archias.

The examinations in grammar and composition will demand thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school, with ability to use this knowledge in writing simple Latin prose.

The words, constructions, and range of ideas called for in the examination in composition will be such as are common in the reading of the years covered by the examination.

This requirement is practically the same as that of the College Entrance Examination Board in Latin *a* (i)(ii), *b* or *bf*, *c*, *m*. [New Board Requirements (August 31, 1910), *NR* 1, *NR* 2, *NR* 4.]

ADVANCED LATIN. *One unit.* The Latin reading shall not be less in amount than Vergil, *Aeneid*, Books I-VI. This reading shall be selected from Vergil (*Bucolics*, *Georgics*, and *Aeneid*) and Ovid (*Metamorphoses*, *Fasti*, and *Tristia*).

The candidates will be examined in translation at sight of passages from Vergil and Ovid. They will be examined also upon the following prescribed reading: Vergil, *Aeneid*, Books I, II, and either IV or VI, at the option of the candidate.

This requirement is practically the same as that of the College Entrance Examination Board in Latin *d*, *q*. [New Board Requirements (August 31, 1910), *N R* 5.]

TWO-YEAR REQUIREMENT. *Two units.* For candidates for the degree of Bachelor of Science only. The reading shall not be less in amount than Caesar, *Gallic War*, I-IV, and should be selected by the schools from Caesar (*Gallic War* and *Civil War*) and Nepos (*Lives*). Candidates will be examined in translation at sight of passages from the above authors, also in grammar and composition. (See statement under Elementary Latin.)

GREEK. ELEMENTARY GREEK. *Two units.* The requirement in Elementary Greek includes: (1) Xenophon's *Anabasis*, Books I-IV, with attention not only to language, but to subject-matter as well; (2) grammar, including a familiar knowledge of inflection, word-formation, and ordinary syntax. This will be tested by: (*a*) questions upon a passage from the *Anabasis*; (*b*) translation into Greek, with accents, of simple English sentences.

This requirement is the same as that of the College Entrance Examination Board in Greek *a* (i and ii), *b*, and *g*.

ADVANCED GREEK. *One unit.* The requirement in Advanced Greek includes: (1) three books of Homer's *Iliad* or *Odyssey*, with questions upon meter, Homeric dialect, etc., or (upon request four weeks in advance of the examination) an equivalent amount of a prose author; (2) translation at sight of simple Attic prose or Homer; (3) translation into Greek, with accents, of a continuous passage of English narrative, based upon material similar to the *Anabasis*.

This requirement is the same as that of the College Entrance Examination Board in Greek *c*, *f*, and *h*.

FRENCH. *a.* ELEMENTARY FRENCH. *Two units.* At the end of the elementary course the pupil should be able to pronounce French accurately, to read at sight easy French prose, to put into French simple English sentences taken from the language of every-day life or based upon a portion of the French text read, and to answer questions on the rudiments of the grammar as defined below.

During the first year the work should comprise: (1) Careful drill in pronun-

ciation; (2) the rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural nouns, the inflection of adjectives, participles, and pronouns; the use of personal pronouns, common adverbs, prepositions, and conjunctions; the order of words in the sentence, and the elementary rules of syntax; (3) abundant easy exercises, designed not only to fix in the memory the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; (4) the reading of from 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy variations of the sentences read (the teacher giving the English), and in reproducing from memory sentences previously read; (5) writing French from dictation.

During the second year the work should comprise: (1) the reading of from 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographical sketches; (2) constant practice, as in the previous year, in translating into French easy variations upon the texts read; (3) frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; (4) writing French from dictation; (5) continued drill upon the rudiments of grammar, with constant application in the construction of sentences; (6) mastery of the forms and use of pronouns, pronominal adjectives, of all but the rare irregular verb forms, and of the simpler uses of the conditional and subjunctive.

Suitable texts for the second year are: About's *Le roi des montagnes*, Bruno's *Le tour de la France*, Daudet's easier short tales, La Bédollière's *La Mère Michel et son chat*, Erckmann-Chatrian's stories, Foa's *Contes biographiques* and *Le petit Robinson de Paris*, Foncin's *Le pays de France*, Labiche and Martin's *La poudre aux yeux* and *Le voyage de M. Perrichon*, Legouvé and Labiche's *La cigale chez les fourmis*, Malot's *Sans famille*, Mairet's *La tâche du petit Pierre*, Mérimée's *Colomba*, extracts from Michelet, Sarcey's *Le siège de Paris*, Verne's stories.

This requirement is the same as that of the College Entrance Examination Board in French *a*.

b. Intermediate French. *One unit.* At the end of the intermediate course the pupil should be able to read at sight ordinary French prose or simple poetry, to translate into French a connected passage of English based on the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

The work should comprise the reading of from 400 to 600 pages of French of ordinary difficulty, a portion to be in the dramatic form; constant practice in giving French paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

Suitable texts are: About's stories, Augier and Sandeau's *Le gendre de M. Poirier*, Béranger's poems, Corneille's *Le Cid* and *Horace*, Coppée's poems,

Daudet's *La Belle-Nivernaise*, La Brète's *Mon oncle et mon curé*, Madame de Sévigné's letters, Hugo's *Hernani* and *La chute*, Labiche's plays, Loti's *Pêcheur d'Islande*, Mignet's historical writings, Molière's *L'avare* and *Le bourgeois gentilhomme*, Racine's *Athalie*, *Andromaque*, and *Esther*, George Sand's plays and stories, Sandeau's *Mademoiselle de la Seiglière*, Scribe's plays, Thierry's *Récits des temps mérovingiens*, Thiers's *L'expédition de Bonaparte en Égypte*, de Vigny's *La canne de jonc*, Voltaire's historical writings.

This requirement is the same as that of the College Entrance Examination Board in French *b*.

GERMAN. *a.* Elementary German. *Two units.* At the end of the elementary course in German the pupil should be able to read at sight, and to translate, if called upon, by way of proving ability to read, a passage of very easy dialogue or narrative prose, help being given upon unusual words and construction, to put into German short English sentences taken from the language of every-day life or based upon the text given for translation, and to answer questions upon the rudiments of the grammar, as defined below.

During the first year the work should comprise: (1) careful drill upon pronunciation; (2) the memorizing and frequent repetition of easy colloquial sentences; (3) drill upon the rudiments of grammar, that is, upon the inflection of the articles, of such nouns as belong to the language of every-day life, of adjectives, pronouns, weak verbs, and the more usual strong verbs; also upon the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word-order; (4) abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; (5) the reading of from 75 to 100 pages of graduated texts from a reader, with constant practice in translating into German easy variations upon sentences selected from the reading lesson (the teacher giving the English), and in the reproduction from memory of sentences previously read.

During the second year the work should comprise: (1) the reading of from 150 to 200 pages of literature in the form of easy stories and plays; (2) accompanying practice, as before, in the translation into German of easy variations upon the matter read and also in the offhand reproduction, sometimes orally and sometimes in writing, of the substance of short and easy selected passages; (3) Continued drill upon the rudiments of the grammar, directed to the ends of enabling the pupil, first, to use his or her knowledge with facility in the formation of sentences, and, secondly, to state his or her knowledge correctly in the technical language of grammar.

Stories suitable for the elementary course can be selected from the following list: Andersen's *Märchen* and *Bilderbuch ohne Bilder;* Arnold's *Fritz auf Ferien;* Baumbach's *Die Nonna* and *Der Schwiegersohn;* Gerstäcker's *Germelshausen;* Heyse's *L'Arrabbiata*, *Das Mädchen von Treppi*, and *Anfang und Ende;* Hillern's *Höher als die Kirche;* Jensen's *Die braune Erica;* Leander's

Träumereien and *Kleine Geschichten;* Seidel's *Märchen;* Stökl's *Unter dem Christbaum;* Storm's *Immensee* and *Geschichten aus der Tonne;* Zschokke's *Der zerbrochene Krug.*

Good plays adapted to the elementary course are much harder to find than good stories. Five-act plays are too long. They require more time than is advisable to devote to any one text. Among shorter plays the best available are perhaps Benedix's *Der Prozess*, *Der Weiberfeind*, and *Günstige Vorzeichen;* Elz's *Er ist nicht eifersüchtig;* Wichert's *An der Majorsecke;* Wilhelmi's *Einer muss heiraten.* It is recommended, however, that not more than one of these plays be read. The narrative style should predominate. A good selection of reading matter for the second year would be Andersen's *Märchen*, or *Bilderbuch*, or Leander's *Träumereien*, to the extent of, say, forty pages. After that such a story as *Das kalte Herz;* or *Der zerbrochene Krug;* then *Höher als die Kirche*, or *Immensee;* next a good story by Heyse, Baumbach, or Seidel; lastly *Der Prozess.*

This requirement is the same as that of the College Entrance Examination Board in German *a.*

b. Intermediate German. *One unit.* At the end of the intermediate course the pupil should be able to read at sight German prose of ordinary difficulty, whether recent or classical; to put into German a connected passage of simple English, paraphrased from a given text in German; to answer any grammatical questions relating to usual forms and essential principles of the language, including syntax and word-formation, and to translate and explain (so far as explanation may be necessary) a passage of classical literature taken from some text previously studied.

The work should comprise, in addition to the elementary course, the reading of about 400 pages of moderately difficult prose and poetry, with constant practice in giving, sometimes orally and sometimes in writing, paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; also grammatical drill upon the less usual strong verbs, the use of articles, cases, auxiliaries of all kinds, tenses and modes (with special reference to the infinitive and subjunctive), and likewise upon word-order and word-formation.

The intermediate course is supposed to be the elementary course, plus one year's work at the rate of not less than four recitations a week. Suitable reading matter for the third year can be selected from such works as the following: Ebner-Eschenbach's *Die Freiherren von Gemperlein;* Freytag's *Die Journalisten* and *Bilder aus der deutschen Vergangenheit*, — for example, *Karl der Grosse*, *Aus den Kreuzzügen*, *Doktor Luther*, *Aus dem Staat Friedrichs des Grossen;* Fouqué's *Undine;* Gerstäcker's *Irrfahrten;* Goethe's *Hermann und Dorothea* and *Iphigenie;* Heine's poems and *Reisebilder;* Hoffmann's *Historische Erzählungen;* Lessing's *Minna von Barnhelm;* Meyer's *Gustav Adolf's Page;* Moser's *Der Bibliothekar;* Riehl's *Novellen*, —for example, *Burg Neideck*,

Der Fluch der Schönheit, Der stumme Ratsherr, Das Spielmannskind; Rosegger's *Waldheimat;* Schiller's *Der Neffe als Onkel, Der Geisterseher, Wilhelm Tell, Die Jungfrau von Orleans, Das Lied von der Glocke, Balladen;* Scheffel's *Der Trompeter von Säkkingen;* Uhland's poems; Wildenbruch's *Das edle Blut.*

This requirement is the same as that of the College Entrance Examination Board in German *b*.

HISTORY. *a.* Ancient History. *One unit.* Special reference to Greek and Roman history, and including also a short introductory study of the more ancient nations and the chief events of the early Middle Ages, down to the death of Charlemagne (814).

b. Medieval and Modern European History. *One unit.* From the death of Charlemagne to the present time.

c. English History. *One unit.*

d. American History and Civil Government. *One unit.*

Each of the above topics is intended to represent one year of historical work wherein the study is given five times per week, or two years of historical work wherein the study is given three times per week.

The examination in history will be so framed as to require comparison and the use of judgment on the pupil's part rather than the mere use of memory. The examinations will presuppose the use of good text-books, collateral reading, and practice in written work. Geographical knowledge will be tested by requiring the location of places and movements on an outline map.

This requirement is the same as that of the College Entrance Examination Board in History.

PHYSICS. *One unit.* The unit in Physics consists of at least one hundred and twenty periods of sixty minutes each. Time spent in the laboratory shall be counted at one-half its face value.

Preparation in Physics should include: (*a*) the study of one standard text-book, for the purpose of obtaining a connected and comprehensive view of the subject. The student should be given opportunity and encouragement to consult other scientific literature; (*b*) instruction by lecture-table demonstrations, to be used mainly for illustration of the facts and phenomena of physics in their qualitative aspects and in their practical applications; (*c*) individual laboratory work, consisting of experiments requiring at least the time of thirty double periods. The experiments performed by each student should number at least thirty. The work should be so distributed as to give a wide range of observation and practice. The aim of laboratory work should be to supplement the pupil's fund of concrete knowledge and to cultivate his power of accurate observation and clearness of thought and expression. The exercises should be chosen with a view to furnishing forceful illustrations of funda-

mental principles and their practical applications. They should be such as yield results capable of ready interpretation, obviously in conformity with theory, and free from the disguise of unintelligible units. Slovenly work should not be tolerated, but the effort for precision should not lead to the use of apparatus or processes so complicated as to obscure the principle involved.

Throughout the whole course special attention should be paid to the common illustrations of physical laws and to their industrial applications.

In the solution of numerical problems, the student should be encouraged to make use of the simple principles of algebra and geometry to reduce the difficulties of solution. Unnecessary mathematical difficulties should be avoided, and care should be exercised to prevent the student from losing sight of the concrete facts in the manipulation of symbols.

Every candidate must present as a part of the examination, a note-book, certified by the teacher, containing in the candidate's own language a description of his laboratory exercises, with a careful record of the steps, observations, and results of each exercise. The note-book must afford clear evidence of the pupil's ability to make accurate observations and to draw direct conclusions.

This requirement is the same as that of the College Entrance Examination Board in Physics.

CHEMISTRY. *One unit.* The following outline includes only the indispensable things which must be studied in the class-room and laboratory. The material is, for the most part, common to all elementary text-books and laboratory manuals. The order of presentation will naturally be determined by the teacher.

Outline. The chief physical and chemical characteristics, the preparation and the recognition of the following elements and their chief compounds: *oxygen*, *hydrogen*, *carbon*, *nitrogen*, *chlorine*, *bromine*, *iodine*, *fluorine*, *sulphur*, phosphorus, silicon, potassium, *sodium*, calcium, magnesium, *zinc*, copper, mercury, silver, aluminum, *lead*, tin, *iron*, manganese, chromium.

More detailed study should be confined to the italicized elements (as such) and to a restricted list of compounds, such as: water, hydrochloric acid, carbon-monoxide, carbon-dioxide, nitric acid, ammonia, sulphur dioxide, sulphuric acid, hydrogen-sulphide, sodium-hydroxide.

Attention should be given to the atmosphere (constitution and relation to animal and vegetable life), flames, acids, bases, salts, oxidation and reduction, crystallization, manufacturing processes, familiar substances (illuminating gas, explosives, baking powder, mortar, glass, metallurgy, steel, common alloys, porcelain, soap).

Combining proportions by weight and volume; calculations founded on these and Boyle's and Charles's laws; symbols and nomenclature (with careful avoidance of special stress, since these are non-essential); atomic theory, atomic

weights and valency in a very elementary way; nascent state; natural grouping of the elements; solution (solvents and solubility of gases, liquids, and solids, saturation); ionization; mass action and equilibrium; strength (=activity) of acids and bases; conservation and dissipation of energy; chemical energy (very elementary); electrolysis. Chemical terms should be defined and explained, and the pupil should be able to illustrate and apply the ideas they embody. The theoretical topics are not intended to form separate subjects of study, but should be taught only so far as is necessary for the correlation and explanation of the experimental facts.

It is recommended that the candidate's preparation in chemistry should include: (1) individual laboratory work, comprising at least forty exercises; (2) instruction by lecture-table demonstrations, to be used mainly as a basis for questioning upon the general principles involved in the pupil's laboratory investigations; (3) the study of at least one standard text-book, to the end that the pupil may gain a comprehensive and connected view of the most important facts and laws of elementary chemistry.

Every candidate must present as a part of the examination, a note-book, certified by the teacher, containing in the candidate's own language a description of his laboratory exercises, with a careful record of the steps, observations, and results of each exercise. The note-book must afford clear evidence of the pupil's ability to make accurate observations and to draw direct conclusions.

This requirement is the same as that of the College Entrance Examination Board in Chemistry.

BOTANY. *One unit.* The amount of work in this course is designed to occupy a year of five periods a week under good conditions. Where special circumstances, such as exceptional difficulty of obtaining material, etc., prevent the completion of the entire amount while allowing its equivalent in thoroughness, it is recommended that some of the minor topics here and there be omitted rather than that the attempt should be made to cover all more superficially. To provide for this possibility, the examination papers will always include a number of alternative questions.

The course should include a careful study of the general principles of Anatomy and Morphology, Physiology, and Ecology; also the Natural History of the Plant groups, and Classification.

Individual laboratory work by the student is essential and should receive at least double the amount of time given to recitation. Records of the laboratory work, properly certified by the teacher, in which stress is laid upon diagrammatically accurate drawing and precise expressive description, must be handed in at the time of examination.

This requirement is the same as that of the College Entrance Examination Board in Botany.

PHYSIOGRAPHY. *One unit.* The candidate's preparation should include: (1) the study of one of the leading secondary text-books in physical geography, that a knowledge may be gained of the essential principles, and of well-selected facts illustrating those principles; (2) individual laboratory work, comprising at least forty exercises. From one-third to one-half of the candidate's class-room work should be devoted to laboratory exercises. In the autumn and spring field trips should take the place of laboratory exercises. Properly attested reports of field and laboratory work must be submitted at the time of examination.

This requirement is the same as that of the College Entrance Examination Board in Geography.

ADMISSION TO ADVANCED STANDING

A candidate for admission to advanced standing, who comes from an approved institution of collegiate rank, may receive credit, without examination, for work done at such institution. He will be required, however, to present, or to have had accepted elsewhere, the same entrance subjects as are demanded of students entering Brown University without advanced credit; and to cover, or to have covered, all the prescribed subjects in the course leading to the desired degree at Brown University. The committee on Registration and Attendance will determine the amount of credit that he may receive, on receipt of the following papers, all of which should be sent to the Registrar of Brown University: (1) a formal statement, made out and signed by the proper official of the institution previously attended, showing all preparatory subjects accepted by it for entrance, and all the courses attended at college, with their catalogue numbers, and the standing attained therein by the student; (2) a similar official statement as to whether the student has completed the amount of work regularly required up to the time of his withdrawal from the previous institution, or has done work in excess thereof, or of less amount, or has incurred conditions or probation; (3) a marked catalogue of the institution previously attended, describing the subjects taken; (4) a letter of honorable dismissal from the institution last attended. In case the student desires to present subjects for entrance in addition to those required or accepted at the previous institution, they will be accepted without examination by Brown University provided that they are certified by an approved preparatory school.

ADMISSION OF SPECIAL STUDENTS

Mature persons of good character who desire to pursue some special subjects and who have had the requisite preliminary training are allowed to enter the various courses of study in the University without becoming candidates for a degree.

Students who come directly from schools offering full preparatory courses for college, and who are unable to meet the requirements for admission to the regular courses either by examination or certification, will not be admitted as special students.

Applicants for registration as special students must present to the Registrar, on or before August 1 if possible, a certified and detailed statement of the nature and extent of their preparatory work, including testimonials of character and ability. In case a student has attended more than one institution, he must present credentials from each of them. Applicants must satisfy the Committee on Registration and Attendance, by passing the entrance examinations or presenting certificates, that they are qualified to pursue the courses desired.

Special students are subject to the same regulations regarding attendance and examinations as candidates for degrees; they must take fifteen hours of class-room work a week unless satisfactory reasons for a smaller assignment are presented.

ADMISSION OF GRADUATE STUDENTS

To be admitted as a candidate for an advanced degree, an applicant must have received the degree of Bachelor of Arts, of Philosophy, of Science,‡ or of Letters from Brown University or some other college of good standing; or, being a student in Brown University, must have completed with a rank of C the work leading to the degree of Bachelor of Arts, of Philosophy, or of Science, with the exception of such an amount as the Committee on Registration and Attendance will allow him to take in excess of a full year's work (fifteen hours a week). A candidate for the degree of Master of Science must have completed in his undergraduate course at least twenty-eight year-hours of work in mathematics and the sciences.

Persons who have obtained the degree of Bachelor of Arts, of Philosophy, of Science, or of Letters, and who desire to pursue graduate studies without being candidates for an advanced degree, are admitted as special graduate students. Such students are subject to all the regulations of the University regarding graduate students except those which relate to candidacy for degrees.

‡ The degree of Bachelor of Science when given for technical work does not lead to the degree of Master of Arts or Doctor of Philosophy in Brown University.

REGISTRATION AND ENROLMENT OF UNDERGRADUATES

REGISTRATION. In September of each year all new students, whether candidates for a degree or special students, must report at the Administration Building between 9 a.m. and 1 p.m. or between 2.30 p.m. and 5 p.m. on the Monday or Tuesday preceding the opening of the first term, and fill out registration cards for the whole of the ensuing year. Failure to comply with this rule will be treated as late registration and a fee of three dollars will be charged. All new students must present at or before the time of registration all credentials necessary for admission as candidates for a degree or as special students.

In May of each year all undergraduates in residence, whether candidates for a degree or special students, must obtain at the Registrar's office registration cards for the next year; these cards must be filled out by the students with a statement of the courses elected for the whole of the ensuing year, and returned not later than June 1. Failure to comply with this rule will be treated as late registration and a fee of three dollars will be charged.

Courses bearing a single number must be elected as a whole. When term courses are grouped in one paragraph (*e.g.* Astronomy 1, 2, 3), the second term may not be taken without the first, nor the third without the second, unless specific statement to the contrary is made. In starred courses a final mark covering the work of the course as a whole will be given at the end of the course, the marks given at the end of the preceding term or terms being regarded as temporary. Changes in registration will be allowed only on presentation of sufficient reasons to the Committee on Registration and Attendance. Requests for permission to make changes in September must be presented to the committee between 9 a.m. and 1 p.m. or between 2.30 p.m. and 5 p.m. on the Monday or Tuesday preceding the opening of the first term. Requests for permission to make changes for the second or third term must be presented to the committee before the beginning of the examinations of the first and second terms respectively, unless these requests are the result of failures, in which case they must be presented in writing to the Registrar two days before the opening of the second and third terms respectively.

ENROLMENT. In September all students whose registration cards have been already approved must report at the Registrar's office between 9 a.m. and 5 p.m. on the Monday or Tuesday preceding the opening of the first term and have their names checked as enrolled for the term. Failure to report will be treated as late enrolment and a fee of three dollars will be charged.

At the beginning of the second and third terms all undergraduates must report at the Registrar's office between 9 a.m. and 5 p.m. on one of the two days preceding the opening of the term and have their names checked as enrolled for the term. Failure to report will be treated as late enrolment and a fee of three dollars will be charged.

REGISTRATION AND ENROLMENT OF GRADUATE STUDENTS

On or before the first day of the academic year, every candidate for registration as a graduate student must file an application with the Dean of the Graduate Department naming the departments, not exceeding three, which he wishes to enter. The application must be made on a blank provided by the Dean, and the blank must be signed by the heads of the departments concerned. The candidate, if not a student or graduate of Brown University, must submit to the Dean, with his application, his diploma or other official evidence of having received a first academic degree, together with a marked catalogue or detailed statement showing the academic courses he has pursued.

A student who has been registered as a graduate student is enrolled as a candidate for a degree when his course of study for the degree has been approved by the Dean of the Graduate Department and by the Faculty. Although graduates of other colleges of good standing are entitled to registration as graduate students, they are not enrolled as candidates for degrees unless the course of study previously pursued by them is, in the opinion of the Dean of the Graduate Department, acting in consultation with the Committee on Registration and Attendance, substantially equivalent to the course leading to the corresponding degree in Brown University. Graduates of colleges in which the course of study is not, in the opinion of this joint committee, equivalent to the corresponding course at Brown University, will be registered as graduate students, but if enrolled they will be required to make up their deficiency under the direction of the committee.

Candidates for advanced degrees must have their selection of courses approved by the heads of the departments in which they are working, and a statement of these courses must be submitted by the heads of the departments to the Dean of the Graduate Department on or before October 15. In the case of candidates for the degree of Doctor of Philosophy the statement submitted in the first year of candidacy may be a preliminary outline of the course, but a final statement must be submitted by the head of the department in which the major subject lies not later than October 15 in the last year of candidacy. No change can be made without the consent of the Dean of the Graduate Department and of the head of the department which offers the course.

REQUIREMENTS FOR DEGREES

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS

I. PRESCRIBED SUBJECTS

Ancient Languages (either Latin or Greek, or both). Six hours. At least three hours must be taken in the Freshman year, and the six hours must be completed by the end of the Sophomore year.

Modern Languages (either French or German, or both). Six hours. At least three hours must be taken in the Freshman year, and the six hours must be completed by the end of the Sophomore year.

Students presenting elementary French only must continue French in the Freshman year and take elementary German in either the Freshman or the Sophomore year. Students presenting elementary German only must continue German in the Freshman year and take elementary French in either the Freshman or the Sophomore year. Students presenting elementary French and elementary German only must continue both languages, but may postpone the continuation of one language until the Sophomore year. Students presenting elementary work in one language and elementary and advanced work in the other must take in the Freshman year the language in which the elementary work only was presented. Students presenting elementary and advanced work in both languages may take the required six hours in either French or German, or both.

Modern Languages (*for students entering in 1911*). *Six hours. In at least one modern language the equivalent of the elementary and intermediate requirement for admission must be taken, or such portion of this requirement as was not presented for admission, and one year-course* (*three hours*) *additional.*‡

Students already in college will be permitted, if they desire, to substitute the new for the existing requirement in Modern Languages.

Mathematics. Four or five hours. Freshman year. Four hours for students not presenting Solid Geometry and Plane Trigonometry. Five hours for students presenting Solid Geometry and Plane Trigonometry.

English. Rhetoric and Composition. Three hours. Freshman year.

European History. Three hours. Sophomore or Junior year.

English Literature. Any one of the courses in English from 10 to 23 inclusive. Sophomore, Junior, or Senior year.

‡ Under this requirement a student who does not present any modern language for admission must take three years (nine hours) of French or three years (nine hours) of German in college.

Physical or Natural Science. Some three-hour course continuous through the year. Freshman, Sophomore, or Junior year.

Political Science, Social Science, and Economics. One three-hour, one-term course in each of the three departments. Sophomore, Junior, or Senior year.

Philosophy. Some three-hour course continuous through the year. Sophomore, Junior, or Senior year.

II. REQUIREMENTS ARRANGED BY YEARS

FRESHMAN YEAR

I. Required Studies. *Latin* 1, 2, 3 or *Greek* 1, 2, 3. *French* 1, or 2, 3, 4, or *German* 1 or 2. *Mathematics* 3, 1, 2 or *Mathematics* 4, 5; 15, 16. *English* 1.

II. Elective Studies. One three-hour course continuous through the year must be chosen from the following list: *Latin* 1, 2, 3; for students presenting elementary and advanced Latin for admission. *Greek* A, B, C; for students not presenting Greek for admission. *Greek* 1, 2, 3; for students presenting elementary and advanced Greek for admission. *French* 1*a*; for students not presenting French for admission. *French* 2, 3, 4; for students presenting elementary French for admission. *French* 5, 6, 7; for students presenting advanced French for admission. *German* 1; for students not presenting German for admission. *German* 2; for students presenting elementary German for admission; *German* 6, or 7, or 23, 24, 25; for students presenting advanced German for admission. *Greek* 33, *Latin* 28, 29 (*Greek and Roman Life and Institutions*); for all students. *Chemistry* 1, 2, 3;‡ for all students. *Botany* 1 or *Biology* 1; for all students. *Geology* 3; for all students. *Mechanical Drawing*, 2, 3; for all students.

SOPHOMORE YEAR

That portion of the required work in ancient and modern languages not completed in the Freshman year, and other required and elective courses sufficient to make a total of fifteen hours a week.

JUNIOR YEAR

The required History and Physical or Natural Science, if not previously taken, and other required and elective courses sufficient to make a total of fifteen hours a week.

SENIOR YEAR

All required courses not previously taken, and elective courses sufficient to make a total of fifteen hours a week.

‡ For admission to Chemistry 4, 5, 6, see page 100.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF PHILOSOPHY‡

For Students now in the University

I. PRESCRIBED SUBJECTS

Modern Languages. An amount sufficient, with the work presented for admission, to complete the elementary course and a year of advanced work in both French and German. A student who is admitted in both advanced French and advanced German must continue one of these languages for one year, three hours a week.

Mathematics. Four or five hours. Freshman year. Four hours for students not presenting Solid Geometry and Plane Trigonometry. Five hours for students presenting Solid Geometry and Plane Trigonometry.

English. Rhetoric and Composition. Three hours. Freshman year.

European History. Three hours. Sophomore or Junior year.

Physical or Natural Science. Some three-hour course continuous through the year. Freshman, Sophomore, or Junior year.

Philosophy. Some three-hour course continuous through the year. Sophomore, Junior, or Senior year.

II. REQUIREMENTS ARRANGED BY YEARS

FRESHMAN YEAR

I. Required Studies. *English* 1. *French* 1, or 2, 3, 4, or *German* 1 or 2. *Mathematics* 3, 1, 2 or *Mathematics* 4, 5; 15, 16.

II. Elective Studies. Two three-hour courses continuous through the year must be chosen from the following list: *Latin* 1, 2, 3; for students presenting elementary and advanced Latin for admission. *Greek* A, B, C; for students not presenting Greek for admission. *Greek* 1, 2, 3; for students presenting elementary and advanced Greek for admission. *French* 1; for students not presenting French for admission. *French* 2, 3, 4; for students presenting elementary French for admission. *French* 5, 6, 7; for students presenting advanced French for admission. *German* 1; for students not presenting German for admission. *German* 2; for students presenting elementary German for admission. *German* 6, or 7, or 23, 24, 25; for students presenting advanced German for admission. *Greek* 33, *Latin* 28, 29 (*Greek and Roman Life and Institutions*); for all students. *Chemistry*, 1, 2, 3;§ for all students.

‡ Students now in college may take advantage of the new Requirements for Concentration, may substitute the new for the present requirements in Modern Languages, and, with the consent of both departments concerned, may substitute a course in Argumentation for the required Mathematics. See pages 79–82.

§ For admission to Chemistry 4, 5, 6, see page 100.

Botany 1 or *Biology* 1; for all students. *Geology* 3; for all students. *Mechanical Drawing 2*, 3; for all students.

SOPHOMORE YEAR

That portion of the required work in modern languages not completed in the Freshman year, and other required and elective courses sufficient to make a total of fifteen hours a week.

JUNIOR YEAR

The required History and Physical or Natural Science, if not previously taken, and other required and elective courses sufficient to make a total of fifteen hours a week.

SENIOR YEAR

All required courses not previously taken, and elective courses sufficient to make a total of fifteen hours a week.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN CIVIL ENGINEERING

FRESHMAN YEAR

First Term	*Second Term*	*Third Term*
Mathematics 17	Mathematics 18	Mathematics 19
Mech. Drawing 6	Mech. Drawing 6	Mech. Drawing 6
English 1	English 1	English 1

and two of the following courses, Chemistry, French, German, Spanish, *subject to the direction of the Committee on Registration and Attendance.*

SOPHOMORE YEAR

Mathematics 20	Mathematics 21	Mathematics 21
Mech. Drawing 1	Mech. Drawing 1	Mech. Drawing 1
Civil Engineering 4	Civil Engineering 5	Civil Engineering 6
Physics 1	Physics 2	Physics 3
‡Economics 1	‡Political Science 1	‡Social Science 1
	Civil Engineering 7	§Civil Engineering 8
	Civil Engineering 9	Civil Engineering 10

JUNIOR YEAR

Civil Engineering 11	Civil Engineering 12	Civil Engineering 19
Mechanics 1	Mechanics 1	Mechanics 3
Astronomy 4	Astronomy 5	
Physics 24	Physics 24	Physics 24
Elect. Engineering 1	Elect. Engineering 2	Civil Engineering 15
Geology 17	Civil Engineering 14	Geology 16

SENIOR YEAR

Civil Engineering 23	Civil Engineering 31	Civil Engineering 17
Civil Engineering 25	Civil Engineering 29	Civil Engineering 18
Civil Engineering 26	Civil Engineering 27	Civil Engineering 28
Civil Engineering 35	Civil Engineering 35	Civil Engineering 24
Mech. Engineering 22	Mech. Engineering 22	Civil Engineering 36
Mechanics 2	Mechanics 2	Civil Engineering 32
Civil Engineering 13	Civil Engineering 30	Civil Engineering 34
		Botany 7

‡ Or some other three-term course, in the Department of English, or History, or Philosophy, chosen with the approval of the head of the Department of Civil Engineering.
§ Civil Engineering 8 is taken during the spring recess.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

FRESHMAN YEAR

First Term	*Second Term*	*Third Term*
Mathematics 17	Mathematics 18	Mathematics 19
Mech. Drawing 6	Mech. Drawing 6	Mech. Drawing 6
English 1	English 1	English 1

and two of the following courses, Chemistry, French, German, Spanish, *subject to the direction of the Committee on Registration and Attendance.*

SOPHOMORE YEAR

Mathematics 20	Mathematics 21	Mathematics 21
Mech. Drawing 1	Mech. Drawing 1	Mech. Drawing 1
Mech. Drawing 4	Mech. Drawing 5	Mech. Engineering 8
Physics 1	Physics 2	Physics 3
‡ Economics 1	‡ Political Science 1	‡ Social Science 1
	Mech. Engineering 1	Mech. Engineering 3

JUNIOR YEAR

Mechanics 1	Mechanics 1	Mechanics 3
Mech. Engineering 4	Mech. Engineering 5	
Mech. Engineering 9	Mech. Engineering 10	Mech. Engineering 11
Physics 24	Physics 24	Physics 24
Elect. Engineering 1	Elect. Engineering 2	Elect. Engineering 3
Elect. Engineering 7	Elect. Engineering 8	Elect. Engineering 9

SENIOR YEAR

Mechanics 2	Mechanics 2	
Mathematics 9	Elect. Engineering 11	§ Physics 19
Elect. Engineering 4	Elect. Engineering 5	Elect. Engineering 6
Physics 23		Physics 23
	Elect. Engineering 12	Elect. Engineering 13
Elect. Engineering 14	Elect. Engineering 14	Elect. Engineering 14
Mech. Engineering 16	Mech. Engineering 17	Mech. Engineering 18
Mech. Engineering 22	Mech. Engineering 22	Civil Engineering 32

‡ Or some other course, not technical, chosen with the approval of the head of the Department of Electrical Engineering.
§ Or an equivalent.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

FRESHMAN YEAR

First Term	*Second Term*	*Third Term*
Mathematics 17	Mathematics 18	Mathematics 19
Mech. Drawing 6	Mech. Drawing 6	Mech. Drawing 6
English 1	English 1	English 1

and two of the following courses, Chemistry, French, German, Spanish, *subject to the direction of the Committee on Registration and Attendance.*

SOPHOMORE YEAR

Mathematics 20	Mathematics 21	Mathematics 21
Mech. Drawing 1	Mech. Drawing 1	Mech. Drawing 1
Mech. Drawing 4	Mech. Drawing 5	Mech. Engineering 8
Physics 1	Physics 2	Physics 3
‡ Economics 1	‡ Political Science 1	‡ Social Science 1
	Mech. Engineering 1	Mech. Engineering 2

JUNIOR YEAR

Mech. Engineering 19	Mech. Engineering 20	Mech. Engineering 21
Mech. Engineering 16	Mech. Engineering 17	Mech. Engineering 18
Mech. Engineering 3	Mech. Engineering 4	
Mech. Engineering 9	Mech. Engineering 10	Mech. Engineering 11
Mechanics 1	Mechanics 1	Mechanics 3
Physics 24	Physics 24	Physics 24

SENIOR YEAR

Mech. Engineering 22	Mech. Engineering 22	
Mech. Engineering 5	Mech. Engineering 6	
Mech. Engineering 12	Mech. Engineering 13	Mech. Engineering 14
Mechanics 2	Mechanics 2	Mech. Engineering 15
Elect. Engineering 1	Elect. Engineering 2	Elect. Engineering 3
Mech. Engineering 23	Mech. Engineering 24	Civil Engineering 32
Mech. Engineering 25	Mech. Engineering 25	Mech. Engineering 25

‡ Or some other course, in the Department of English, or History, or Philosophy, chosen with the approval of the head of the Department of Mechanical Engineering.

NEW REQUIREMENTS FOR THE DEGREE OF BACHELOR OF PHILOSOPHY

For Students entering in 1911

I. PRESCRIBED SUBJECTS

Mathematics. Four or five hours. Four hours for students not presenting Solid Geometry and Plane Trigonometry. This subject may be omitted by students who elect to take Argumentation in the Sophomore year.

A continuous course of three hours through the year in each of the following subjects:

English. Rhetoric and Composition. Three hours. Freshman year.

French or German. In at least one modern language the equivalent of the elementary and intermediate requirement for admission must be taken, or such portion of this requirement as was not presented for admission, and one year-course (three hours) additional.‡

General Biology. Three hours. Freshman or Sophomore year.

Physics, Chemistry, Geology, or Astronomy. This requirement does not apply to students who present Physics and Chemistry for admission. *Chemistry or Geology,* Freshman or Sophomore year. *Physics or Astronomy,* Sophomore year. Only one of this group required.

Philosophy. Sophomore, Junior, or Senior year.

English Literature. Freshman or Sophomore year.

European History. Freshman, Sophomore, or Junior year.

Social and Political Science and Economics. Sophomore, Junior, or Senior year.

Argumentation (for students who do not take Mathematics). Sophomore year.

Classical Civilization. Freshman or Sophomore year. Freshman year for students who do not take Mathematics.

II. REQUIREMENTS ARRANGED BY YEARS

FRESHMAN YEAR

I. Required Studies. *English* 1. *French or German.* A course in continuation of a course presented for admission; *Mathematics* 3, 1, 2 or *Mathematics* 4, 5; 15, 16 (for students who do not elect to take the course in Argumentation in the Sophomore year); *Classical Civilization* (for students who do not take Mathematics); *General Biology, Chemistry, or Geology.*

‡Under this requirement a student who does not present any modern language for admission must take three years (nine hours) of French or three years (nine hours) of German in college.

II. Elective Studies. One three-hour course continuous through the year must be chosen from the following list: *Latin* 1, 2, 3; for students presenting elementary and advanced Latin for admission. *Greek* A, B, C; for students not presenting Greek for admission. *Greek* 1, 2, 3; for students presenting elementary and advanced Greek for admission. *French* 1 *a;* for students not presenting French for admission. *French* 2, 3, 4; for students presenting elementary French for admission. *French* 5, 6, 7; for students presenting advanced French for admission. *German* 1; for students not presenting German for admission. *German* 2; for students presenting elementary German for admission. *German* 6, or 7, or 23, 24, 25; for students presenting advanced German for admission. *Classical Civilization;* for all students. *History* 1; for all students. *English* 11; for all students. *Chemistry* 1, 2, 3;‡ for all students. *Botany* 1 or *Biology* 1; for all students. *Geology* 3; for all students. *Mechanical Drawing* 2, 3; for all students.

SOPHOMORE YEAR

That portion of the required work in modern languages not completed in the Freshman year.

General Biology; for students who have not taken this course in the Freshman year.

Physics, Chemistry, Astronomy, or Geology; for students who have not presented Physics and Chemistry for admission or taken a course in Physical Science in the Freshman year.

Argumentation; for students who have not taken Mathematics in the Freshman year.

Classical Civilization; for students who have not taken this subject in the Freshman year.

English Literature; for students who have not taken English 11 in the Freshman year.

Other required and elective courses sufficient to make a total of fifteen hours a week.

JUNIOR YEAR

The required History, if not previously taken, and other required and elective courses sufficient to make a total of fifteen hours a week.

During the Junior and Senior years a student must take at least four courses outside the department chosen for special work. See Requirements for Concentration, below.

SENIOR YEAR

All required courses not previously taken, and elective courses sufficient to make a total of fifteen hours a week.

‡ For admission to Chemistry 4, 5, 6, see page 100.

REQUIREMENTS FOR CONCENTRATION

At the close of the Sophomore year each student must choose from the following list a department in which he intends to do special work during the Junior and Senior years, and must elect at least three courses of three hours a year each in this department. If he has not already taken a three-hour, year course in the department chosen, he must elect four courses.

These courses must be selected in consultation with the head of the department and must be approved by him. When two departments are combined, the selection must be made in consultation with the head of the department first named.

At any time prior to the beginning of the Senior year a student may, with the approval of the Committee on Registration and Attendance, change the department in which he is to do his special work.

With the approval of the department in which the student is doing special work, he may count as the equivalent of one course, work which does not require regular class-room attendance.

LIST OF DEPARTMENTS IN WHICH SPECIAL WORK MAY BE TAKEN

Art.
Art, and Greek Literature and History.
Art, and Roman Literature and History.
Art, and Music.
Art, and History.
Astronomy.
Astronomy, and Civil Engineering.
Astronomy, and Physics.
Astronomy, and Mathematics.
Astronomy, and Geology.
Biblical Literature and History.
Biblical Literature and History, and Greek Literature and History.
Biblical Literature and History, and Philosophy.
Biology.
Botany.
Botany, and Biology.
Chemistry.
Civil Engineering.
Economics.
Education.
Education, and Philosophy.
Education, and Social and Political Science.
Education, and History.

Electrical Engineering.
English.
Geology.
Germanic Languages and Literatures.
Greek Literature and History.
Greek Literature and History, and Roman Literature and History.
Greek Literature and History, and Biblical Literature and History.
Greek Literature and History, and Indo-European Philology.
Greek Literature and History, and Art.
History.
Mathematics.
Mechanical Engineering.
Mechanics, and Mechanical Drawing.
Mechanics, and any Engineering department.
Philosophy.
Physics (exclusive of Electrical Engineering).
Roman Literature and History.
Roman Literature and History, and Art.
Roman Literature and History, and Greek Literature and History.
Roman Literature and History, and Indo-European Philology.
Romance Languages and Literatures.
Social and Political Science.

REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

To obtain the degree of Master of Arts, the candidate must complete a course of liberal graduate study of not less than fifteen hours a week for one year. When graduate students pursue courses primarily designed for undergraduates, a higher degree of scholarship than in the case of undergraduates will be required.

Graduates of Brown University who have to their credit work done as undergraduates and not counted towards the bachelor's degree may offer such work in partial fulfilment of the requirements for the degree of Master of Arts, provided such work is in courses which may be taken by graduates and does not lie in more than three departments, and provided the student has completed the work with a grade of C.

Work done in residence for an advanced degree at another institution, and not to be used in fulfilment of the requirements for an advanced degree elsewhere, may, with the approval of the Dean of the Graduate Department, be offered in partial fulfilment of the requirements for the degree of Master of Arts; but the equivalent of at least nine hours' work a week for one year must be done at Brown University.

When any part of the work leading to the degree of Master of Arts is done

in absentia,‡ the degree will not be conferred until the end of the second full year of study. The degree *in absentia* must be taken within three years after enrolment, unless the period is extended by special action of the Faculty. Candidacy *in absentia* may be terminated at the end of six months if definite evidence of progress has not been submitted. Candidates *in absentia* must register (by correspondence, if necessary) at the beginning of each college year, and make reports to their instructors at the end of each term. A final public examination is required of all candidates *in absentia*. This examination will be held only when notification of the intention to appear for examination is given on or before April 1 of the year in which the candidate desires to receive the degree.

REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE

To obtain the degree of Master of Science, the candidate must complete a course of scientific study satisfactory to the Dean of the Graduate Department and the departments concerned, of not less than fifteen hours of work a week for one year, and must present a thesis in one of the graduate courses which he is pursuing; in place of the thesis a six-hour graduate laboratory course extending through the year may be accepted. All the work must be in one or more of the following subjects: mathematics, engineering, physics, chemistry, astronomy, the biological sciences, psychology, geology, and mineralogy. At least half the work must be in courses designed wholly or primarily for graduates; the remainder may consist of any courses satisfactory to the departments concerned and to the Dean of the Graduate Department.

All the work must be done in residence at Brown University with the exception that work done for the degree of Master of Science at another institution, and not to be used in fulfilment of the requirements for any degree elsewhere, may, with the approval of the Dean of the Graduate Department and the departments concerned, be accepted in partial fulfilment of the requirements for the Degree of Master of Science to the extent of not more than six hours of work a week for one year.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY§

To obtain the degree of Doctor of Philosophy, the candidate must spend at least two years continuously in residence, pursuing a systematic course of advanced study approved by the Graduate Department, the Faculty, and

‡ Courses *in absentia* are not offered by all departments.

§ As a rule the requirements for this degree, including the thesis, cannot be satisfied in less than three years.

the Board of Fellows, and must pass satisfactory examinations thereon. The candidate must conclude his course with a thesis embodying the results of original research giving evidence of high scholarship and of special attainments in the studies pursued, and constituting as a whole a definite contribution to knowledge. The candidate is examined publicly before June 1 by a committee consisting in each case of the Graduate Department, together with those members of the Faculty who have directed his work and any other officers of professorial rank in the departments concerned. The examination is held only when notification of the intention to appear for examination is given on or before April 1 of the year in which the candidate desires to obtain his degree. The thesis must be presented to the Faculty, in typewritten copy or print, before May 1 in that year. The approval of this thesis by the Faculty is essential to the attainment of the degree.

Work done in residence for the degree of Doctor of Philosophy at another institution, and not to be used in fulfilment of the requirements for an advanced degree elsewhere, may, with the approval of the Dean of the Graduate Department, be offered in partial fulfilment of the requirements for the degree of Doctor of Philosophy. One full year of continuous work, consisting of at least one-half of the minimum requirements for the major and one-half of the minimum requirements for the minor, must be spent at Brown University.

For the degree of Doctor of Philosophy at least two subjects are necessary, a major and a minor, not in the same department; the major subject must constitute not less than three-fifths of the candidate's work. The selection of the courses constituting the major and the minor subjects must receive the approval of the head of the department in which the major subject lies, and of the Dean of the Graduate Department. The approval of the head of the department in which the minor subject lies is also necessary for the courses elected in his department.

The candidate must possess a reading knowledge of Latin, German, and French adequate for the purposes of his special studies, unless for sufficient reasons he is excused in respect to one of these languages. To test the candidate's proficiency in this particular, he is examined before December 1 in the last year of his candidacy by a committee consisting of the heads of the departments in which the major and the minor subjects lie, and the heads of the departments of Latin, German, and French.

A year of work for the degree of Master of Arts may be, but is not necessarily, counted as a year of work for the Degree of Doctor of Philosophy.

REGULATIONS UNDER WHICH A STUDENT MAY TAKE A FIRST DEGREE IN LESS THAN FOUR YEARS

A candidate for a first degree, who has credit for the required number of hours of work, including all the required subjects, may, at the end of the term in which his work is completed, be excused from further attendance at the University, and may receive his degree at the Commencement next following such term.

A candidate for a first degree who has maintained a satisfactory standing in his studies may, subject to the consent of the Committee on Registration and Attendance, take work in addition to the regular number of hours prescribed in the curriculum of the course which he is pursuing.

A candidate for a first degree may receive credit for work done at the summer school of an approved institution of collegiate rank, provided that the work have the approval of the head of the corresponding department in Brown University. The amount of credit given at the institution in question will be given at Brown University, but the total credit for work at summer schools in any one summer shall not exceed fifteen term hours.

A candidate for a first degree may, with the consent of the head of a department and with the approval of the Faculty, pursue studies connected with that department during any summer in which he does not attend a summer school, and may receive credit for such studies, provided that the work be under the supervision of the head of the department concerned and that the candidate pass an examination in all the work before the end of the following term. The amount of credit will be determined by the head of the department, but the total credit for any one summer shall not exceed nine term hours. No student will be allowed to do summer work in connection with any department of the University until he has presented to the head of the department a registration slip signed by the Registrar.

A student who at the beginning of his Senior year lacks less than forty-five term hours of completing his course may, with the consent of the Committee on Registration and Attendance, distribute his work over the year.

A student who at the beginning of any term lacks less than fifteen term hours of completing his course may, for reasons deemed sufficient by the Committee on Registration and Attendance, be excused from taking more than the necessary number of hours.

For conditions under which graduate work may be pursued during the Senior year, see page 69, under "Admission of Graduate Students."

ATTENDANCE, STANDING, AND EXAMINATIONS

ATTENDANCE. Every student is required to attend every exercise in the several studies to which he is assigned and also the daily Chapel service.

STANDING. A record is kept of the attendance of every student and of his proficiency in his several studies. At the close of each term a report is sent to the parent or guardian of every undergraduate student containing a record of all his absences from required exercises, and indicating his standing in each of his studies for the term and his deficiency in any study or studies, if any deficiency exists. A student who has failed in three or more courses in any term, counting for more than eight hours a week, cannot continue his work without the permission of the Committee on Registration and Attendance. The standing of students is indicated by letters as follows:

H is assigned to those whose work is of such excellence as to merit the designation of honor work.

C is assigned to those who have passed with credit.

P is assigned to those who have passed in the subject, but deserve no higher recognition.

F is assigned to those who have failed to pass, but who, in the opinion of the instructor, should be allowed a second examination.

FF is assigned to those whose work during the term has been so unsatisfactory that, in the opinion of the instructor, they should not be allowed an examination, or to those whose work in the regular examination has been so unsatisfactory that, in the opinion of the instructor, they should not be allowed a second examination, or to those who, in a laboratory course, have not completed half the work required.

I is assigned to those whose work is incomplete, but satisfactory so far as done.

A is assigned to those who were absent from the examination, unless FF has already been assigned.

AA is assigned to those who have been absent one-half the time in a course, or to those whose absence from the term examination is not excused by the Committee on Registration and Attendance.

EXAMINATIONS. Except in laboratory, seminary, and similar work, all classes are examined at the close of each term. A student is not admitted to the examination in a study in which he has received the mark FF or AA.

Examinations other than the regular term examinations are given only in the cases of: (1) students who have received the mark F, (2) students who have received the mark A, and (3) candidates for advanced standing.

A student is not admitted to a special examination except on written au-

thorization from the Registrar. If the examination is taken to remove the mark F or A, the student must pay to the Registrar a fee of two dollars. The Registrar does not authorize special examinations for advanced standing or to remove the mark A without the consent of the Committee on Registration and Attendance.

Special examinations upon the work of the first and second terms are given only during the following term on the third Wednesday and succeeding Wednesdays and Saturdays, or in September of the next academic year, on as many days as may be necessary preceding the opening of the term. Special examinations upon the work of the third term are given only on the above-mentioned days in the following September.

Students desiring special examinations in the second or third term must make application to the Registrar not later than the first Saturday of the term, specifying the subjects in which examinations are desired. On or before the second Wednesday of the term, a schedule of all special examinations will be posted. Students desiring special examinations in September must make application to the Registrar not later than August 15, specifying the subjects in which examinations are desired. A schedule of the September examinations is sent to the students concerned about September 1. Special examinations on the work of the third term of the Senior year are arranged at the convenience of the instructor.

Special examinations at times other than those scheduled are allowed only by consent of the Committee on Registration and Attendance.

Special examinations for advanced standing are, so far as possible, arranged at the times assigned for other special examinations.

* * *

Beginning with 1911-12 the college year will be divided into two terms. This will necessitate changes in the University Calendar, in the regulations affecting registration and the payment of term bills, and in the arrangement of Courses of Instruction. Full particulars will be published in the April Bulletin.

COURSES OF INSTRUCTION

IN every department the courses that bear a single number must be elected as a whole. When term courses are grouped in one paragraph (e.g. *Astronomy 1, 2, 3*), *the second term may not be taken without the first, nor the third without the second, unless specific statement to the contrary is made. In starred courses a final mark covering the work of the course as a whole is given at the end of the course, the marks given at the end of the preceding term or terms being regarded as temporary. When the time of meeting is not announced, it will be arranged by the instructor at the beginning of the term.*

I. ART

WILLIAM CAREY POLAND, A.M., LITT.D., *Professor of the History of Art*

1, 2, 3. *History of Art from Antiquity through the Renaissance*

First term, ancient art; a general course in the history of ancient art, chiefly Greek. Second term, Roman, early Christian, and Medieval art; a study of Roman, Romanesque, and Gothic art, with some notice of Byzantine, Arabian, and Oriental art. Third term, art of the Renaissance; the fifteenth and sixteenth centuries; the effect on art of the dominant motives of the epoch, the development of art in the different countries of Europe, the great masters and their most significant works. Text-book, lectures, lantern views. Students who elect this course are advised to elect also, if possible, course 11, *Practical Work in Art.*

Three hours. Through the year. Elective for Sophomores, Juniors, Seniors, and Graduates. Each term may be elected independently. *Mon., Wed., Th., at 10.20.*

4, 5. *Modern Art*

First term, the seventeenth and eighteenth centuries. Second term, the nineteenth century. Text-book, lectures, special assigned topics, lantern views.

Three hours. First and second terms. Elective for Juniors, Seniors, and Graduates, who have credit for 3. *Tu., Th., Sat., at 12.20.*

6. *Theory and Criticism of the Fine Arts*

A study of the more important facts and laws of artistic production. Text-book, special assigned topics, illustrated lectures.

Three hours. Third term. Elective for students who have credit for any one of the courses 1 to 5. *Tu., Th., Sat., at 12.20.*

12. *Renaissance Art, Advanced Course*

Critical study of the art of the fifteenth and sixteenth centuries, particularly Italian. A more detailed study of the spiritual conditions, the influences, and the masters, than in 3.

Three hours. Through the year. Elective for students who have credit for 3. *Mon., Th., Fri., at 9.20.*

7. *Seminary in Classical Architecture*

Critical study; reading of Vitruvius in Latin; discussion of the principles followed by the Greek and Roman architects, and of the influence of Vitruvius upon the Renaissance.

Three hours. Second and third terms. Elective for Graduates. Offered if three or more elect the course. It is advised that application be made to Professor Poland at an early date.

[8. *Seminary in Greek and Roman Sculpture*]

An archaeological course based on Overbeck's *Schriftquellen.*

Three hours. Through the year. Elective for Graduates who read Greek and Latin. Not offered in 1910–11.

9. *Seminary Study of the Acropolis of Athens*

Critical reading, in Greek, of Pausanias' account of the Acropolis of Athens; lectures and illustrations.

Three hours. First term. Elective for Graduates who read Greek and Latin. Offered if three or more elect the course. It is advised that application be made to Professor Poland at an early date.

10. *Freehand Drawing*

Training of hand and eye by progressive study of models of machine parts, casts of ornamental forms, and still-life objects.

One hour. Two hours of drawing. Through the year. Elective for all students. Given at the Rhode Island School of Design. *Tu., or Th., or Fri., at 2.20.*

11. *Practical Work in Art*

Six hours of drawing or other practical work. To illustrate the principles of delineation, light and shade, and color, and the principles of design in architecture, sculpture, and painting, as exemplified in the historic forms of art.

Three hours. Through the year. Elective for students who have credit for 10, and who have taken or are taking 1, 2, 3. Given at the Rhode Island School of Design. *Tu., Th., Fri., at 2.20.*

13. *Architectural Design*

Principles of architectural design and composition taught by means of lectures, problems in design, and working drawings.

Three hours. One hour of recitation and four hours of drawing. Through the year. Elective for students who have credit for Art 10 and Mechanical Drawing 1. Given at the Rhode Island School of Design by Mr. Huger Elliott, Director. *Th. at 3.20.*

II. ASTRONOMY

Winslow Upton, A.M., Sc.D., *Professor of Astronomy*
Robert Horace Baker, Ph.D., *Acting Assistant Professor of Astronomy*

1, 2, 3. *General Course*

Fundamental conceptions of the science; methods of professional study; present state of our knowledge of the heavenly bodies. Designed either for purposes of general culture or as a preparation for advanced work. *Professor* Upton. [This year *Professor* Baker.]

Three hours. Through the year. Elective for Juniors and Seniors who have credit for Mathematics 3, 1, 2. *Tu., Th., Fri., at 3.20.* Observations at Ladd Observatory.

4, 5. *Field Astronomy*

Application of astronomy to geodesy; the problems of time, latitude, longitude, and azimuth. Computations and observations. *Professor* Upton. [This year *Professor* Baker.]

Three hours. First and second terms. Required of candidates for the degree of Bachelor of Science in Civil Engineering. Elective for Juniors and Seniors who have credit for Mathematics 3, 1, 2. May be taken at the same time as 1, 2, 3. Followed in the third term by Civil Engineering 15. *Mon., Tu., Th., at 2.20.* Observations at Ladd Observatory.

13, 14, 15. *Advanced Astronomy*

Subjects selected to meet the requirements of individual students. *Professor* Upton. [This year *Professor* Baker.]

Three hours. Through the year. Elective for Graduates and approved Undergraduates.

III. BIBLICAL LITERATURE AND HISTORY‡

HENRY THATCHER FOWLER, PH.D., *Professor of Biblical Literature and History*

NATHAN STERN, PH.D., *Lecturer in Biblical Literature and History*

LANGUAGES

1. *Elementary Hebrew*

Grammar; exercises in writing Hebrew; translation of parts of Genesis and Deuteronomy. *Dr.* STERN.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates.

2. *Historical Hebrew*

Reading of the books of Samuel and Kings with special attention to the acquisition of a vocabulary; review of the elements of Hebrew grammar and study of syntax. *Dr.* STERN.

Three hours. Through the year. Elective for students who have credit for 1.

3. *Hebrew Literature*

Prophetic literature. Critical translation of the prophetic books of the Old Testament and study of the development of Israel's prophecy. In succeeding years corresponding courses in the Psalm, Wisdom, and Legal literature of the Old Testament will be offered. *Professor* FOWLER.

Three hours. Through the year. Elective for Graduates and approved Undergraduates.

4. *Textual Criticism of the Old Testament*

The principles and method of textual criticism, in connection with the study of one of the shorter prophetic books. *Dr.* STERN.

Three hours. One term. Offered if applied for by Graduates.

5. *Biblical Aramaic*

Grammar and reading of the Aramaic portions of the Old Testament. *Dr.* STERN.

Three hours. One term. Offered if applied for by students who have credit for 1.

‡ For conditions under which students may receive credit in the Newton Theological Institution for work done in this department, see page 178.

6. *Elementary Arabic*

Grammar; exercises in writing Arabic; translation of prose selections. *Professor* FOWLER.

Two hours. Through the year. Elective for Seniors and Graduates.

[7, 8, 9. *Gospels and Epistles*]

First term, the Johannine writings. Second term, the Gospel of Mark and the First Epistle of Peter. Third term, the Gospels of Matthew and Luke. First and second terms, *Professor* FOWLER. Third term, *Professor* ALLINSON.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Each term may be elected independently. Not offered in 1910–11.

10, 11, 12. *Acts and Pauline Epistles*

Characteristics of Hellenistic Greek; translation, and investigation of date, authorship, and thought. First term, Acts. Second term, Thessalonians and Galatians. Third term, Corinthians and Romans. If desired by the class, translation from the writings of Justin Martyr may be substituted for the specified reading of the third term. *Professor* FOWLER.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Each term may be elected independently. *Wed., Fri., Sat., at 11.20.*

LITERATURE AND HISTORY IN ENGLISH‡

13, 17, 18. *Old Testament Literature and History*

First term, early Semitic history, the formative age of Hebrew history, and Hebrew literature before the Monarchy. Second term, history and literature of the Hebrew Monarchy. Third term, Jewish history and literature from the Captivity to the conquest of Alexander. Includes nearly the entire Old Testament history and literature. In connection with 14, 19, 20, gives a comprehensive view of Biblical history and literature. The books are read in the best English translations. *Professor* FOWLER.

Three hours. Through the year. Elective for Sophomores, Juniors, Seniors, and Graduates. Each term may be elected independently. *Mon., Wed., Th., at 10.20.*

‡ Course 21, 22, 23 gives a rapid survey of the Bible as a part of the world's literature. It is designed especially for those who do not expect to pursue further courses in this department.

Courses 13, 17, 18 and 14, 19, 20 are introductory to more detailed courses in the University or the Theological Seminary. They are also designed for those who, without intending to specialize in this field, desire a comprehensive view of the nature and results of the historical as well as the literary study of the Bible.

[14, 19, 20. *New Testament Literature and History*]

First term, the Greek, Maccabean, and Roman ages of Jewish history and literature. Second term, the four Gospels and the life of Christ. Third term, the Acts, Epistles, Apocalypse, and the history of the Apostolic age. Includes a large part of the Jewish writings from the conquest of Alexander to the destruction of Jerusalem, and the entire New Testament, studied in its Jewish setting. Emphasis placed upon the connection between the history and the literature. This course with 13, 17, 18, gives a comprehensive view of Biblical history and literature. The books are read in the best English translations. *Professor* FOWLER.

Three hours. Through the year. Elective for Sophomores, Juniors, Seniors, and Graduates. Not offered in 1910–11.

21, 22, 23. *The English Bible as Literature*

An outline of the literary history of the Old and New Testaments; the literary forms represented in the Bible; the place of the Bible in English literature. Emphasis placed upon the literature itself and its connection with the present. Lectures and assigned readings from the English Bible. First term, Old Testament literature from the beginning to the fall of Jerusalem in 586 B.C. Second term, from the Babylonian exile to the completion of the Old Testament. Third term, the New Testament. *Professor* FOWLER.

Three hours. Through the year. Elective for Sophomores, Juniors, Seniors, and Graduates. Each term may be elected independently. *Mon., Tu., Th., at 11.20.*

15.* *Biblical Seminary*

Subject for 1910–11: Messianic Prophecy. *Professor* FOWLER.

Three hours. Through the year. Elective for Graduates and approved Juniors and Seniors.

16. *Principles of Historical Criticism and Research*

This course is the same as course 25 offered by the Department of History. *Professor* MACDONALD.

One hour. One term. Elective for Graduates of one year's standing. Required of all candidates for the degree of Doctor of Philosophy in Biblical Literature and History.

IV. BIOLOGY‡

ALBERT DAVIS MEAD, PH.D., *Professor of Biology*
FREDERIC POOLE GORHAM, A.M., *Associate Professor of Biology*
HERBERT EUGENE WALTER, PH.D., *Assistant Professor of Biology*
PHILIP HENRY MITCHELL, PH.D., *Instructor in Physiology*
JOHN BURNHAM FERGUSON, A.B., M.D., *Demonstrator in Anatomy*

1. *General Biology*

Introductory to all other courses in the department; also designed for those who, without intending to pursue the subject further, desire a general view of biological work and biological theories. Aims to give an introduction to laboratory methods of dissection and experiment and the use of the microscope, to afford a general view of the structure and functions of animals and plants, and to present an outline of the more important biological theories, such as evolution, natural selection, variation, mutation, and heredity. After the first term Biology 1 and Botany 1 are identical and the classes are combined. *Professor* GORHAM.

Three hours. Six hours of attendance. Through the year. Elective for Undergraduates. *Mon., Tu., Th., 2.20 to 4.20.*

2. *Comparative Anatomy of Vertebrates*

Intended not only for the general student, but also for those who are particularly interested in zoölogy and for those who expect to study medicine. The structure and significance of the various organs of vertebrates with particular reference to man. Students are permitted to attend certain clinics and autopsies at the Rhode Island Hospital. Laboratory work and lectures. *Professor* WALTER.

Three hours. Six hours of attendance. Through the year. Elective for Sophomores, Juniors, and Seniors, who have credit for 1. *Mon., Wed., Fri., at 8.*

10. *Embryology and Histology*

The origin and the development of the individual body; the elementary structure of the adult organs. Practice in micro-technic. Adapted to the requirements of general students as well as of those intending to study medicine. *Professor* MEAD.

Three hours. Six hours of attendance. Through the year. Elective for Juniors and Seniors who have credit for 1. *Tu., Th., Sat., at 8.*

‡ It is recommended that courses in Biology be taken in the following order: 1; 2; 10; 4, 5, 3; 7, 8 or 33; 9; 19 or 34, 30, 18.

9. *Anatomy of the Nervous System*

A study of the architecture and composition of the brain, nerves, and sense organs in man; comparison with the nervous system of lower vertebrates; relation of nervous structure to mental activity. *Professor* MEAD.

Three hours. Six hours of attendance. Through the year. Elective for Juniors and Seniors who have credit for 1.

4, 5. *Advanced Histology and Pathology*

Advanced work in micro-technic and in normal and pathological histology. Adapted, to some extent, to individual requirements. *Professor* MEAD.

Three hours. Six hours of attendance. First and second terms. Elective for Juniors, Seniors, and Graduates, who have credit for 1 and 10.

3. *Bacteriology*

A general discussion of bacteria in all their relations, with special attention in the laboratory to the methods of studying bacteria, including the isolation, systematic study, and determination of unknown species. Lectures and laboratory work. *Professor* GORHAM.

Three hours. Six hours of attendance. Third term. Elective for Juniors and Seniors, and for Sophomores who are not taking any other course in the department. *Mon., Wed., Th., at 10.20.*

7. *Chemical Physiology*

Designed for those who are interested in physiology either from a medical or a general standpoint, and also for those who are specializing in chemistry and desire a knowledge of vital chemical processes. Includes: the chemistry of proteins, carbohydrates, and fats; the physiology of the digestive system, with the study of secretions and of artificial salivary, gastric, and pancreatic digestions; examination of blood, bile, and urine; the analysis of foods with special reference to milk. *Dr.* MITCHELL.

Three hours. Six hours of attendance. First and second terms. Must be preceded by Chemistry 1, 2, 3, and should be preceded by Chemistry 10. Elective for Juniors and Seniors, and for Sophomores who are not taking any other course in the department. *Tu., Fri., Sat., at 10.20.*

8. *Physical Physiology*

The physiology of muscle and nerve; the physics and physiology of the circulatory, respiratory, and alimentary systems; the causes and

theories of sleep; the physiology of the special senses. *Dr.* MITCHELL.

Three hours. Six hours of attendance. Third term. Must be preceded by 7. Elective for Juniors and Seniors, and for Sophomores who are not taking any other course in the department. *Tu., Fri., Sat., at 10.20.*

33. *Clinical Analysis*

Practice in methods of analysis used in medical diagnosis. Analysis of urine; examination of blood and of feces; gastric analysis. *Dr.* MITCHELL.

Three hours. Six hours of attendance. Third term. Must be preceded by 7. Elective for Juniors, Seniors, and Graduates, and for Sophomores who are not taking any other course in the department.

19. *Entomology*

A study of insects in their scientific and economic relations. Lectures and laboratory work. *Professor* GORHAM.

One hour. Two hours of attendance. First term. Elective for Undergraduates. *Wed., 2.20 to 4.20.*

[34. *Comparative Anatomy of Invertebrates*]

A study of some important features of the anatomy of the invertebrates. Lectures and laboratory work. *Professor* GORHAM.

One hour. Two hours of attendance. First term. Elective for Undergraduates. Not offered in 1910–11.

30. *Protozoölogy*

A consideration of the forms and activities of micro-organisms and their relation to disease. Lectures and laboratory work. *Professors* GORHAM *and* WALTER.

One hour. Two hours of attendance. Second term. Elective for Undergraduates. *Wed., 2.20 to 4.20.*

18. *Ornithology*

A study of birds regarded as a group of living animals in relation to their environment. Lectures and field identification of wild birds during their spring migration. *Professor* WALTER.

One hour. Two hours of attendance. Third term. Elective for Undergraduates.

[16. *Evolution*]

The history of biology, principles of classification, geographical distribution, heredity, natural selection, variation, Mendelism, and the

relationship of man to the lower animals. Lectures and assigned reading. *Professor* MEAD.

Three hours. Third term. Elective for Juniors and Seniors. Not offered in 1910–11.

17. *Lectures in Physiology*

A general survey of the activities of living organisms with special reference to the human body, including some applications of modern physiology to healthful living. Lectures and assigned reading. *Dr.* MITCHELL.

Three hours. Third term. Elective for Juniors and Seniors. *Tu., Th., Sat., at 8.*

11. *Biological Seminary*

Discussion of biological theories and problems.

One to three hours. Through the year. Elective for Graduates. *Fri. at 4.20.*

15. *Advanced Biology*

Research work arranged to meet the requirements of individual students. *Professor* MEAD.

Three to twelve hours. Through the year. Elective for Graduates.

12. *Advanced Bacteriology*

Practical work in the preparation of culture media; methods of sterilization and disinfection; qualitative and quantitative biological examination of water, milk, air, soil, and sewage; study of certain pathogenic organisms, with the determination of their pathogenic properties, and the methods of bacteriological diagnosis of disease. Laboratory work and seminary. *Professor* GORHAM.

Three hours. Six hours of attendance. Through the year. Elective for Juniors, Seniors, and Graduates, who have credit for 3. *Mon., Th., at 4.20.*

31. *Bacteriological Research*

Research work arranged to meet the requirements of individual students. *Professor* GORHAM.

Three to twelve hours. Through the year. Elective for Graduates who have credit for 3 and 12.

13. *Advanced Physiology*

Laboratory work and seminary. *Dr.* MITCHELL.

Three to twelve hours. Through the year. Elective for Graduates who have sufficient knowledge of chemistry and physiology.

14. *Human Anatomy*

A course in practical dissection. Laboratory instruction. Students are permitted to attend certain operations at the hospital and to be present at autopsies. *Dr.* FERGUSON.

Three hours. Through the year. Elective for Graduates.

32. Zoölogical Seminary

Reading and discussion of German zoölogical literature selected with reference to the needs of individual students. *Professor* WALTER.

One to three hours. Through the year. Elective for Graduates.

V. BOTANY‡

JAMES FRANKLIN COLLINS, PH.B., *Assistant Professor of Botany*

1. *General Course*

Introductory to other courses in the department; also designed for those who, without intending to pursue the subject further, desire a general view of biological work and biological theories. Aims to give an introduction to laboratory methods of dissection and experiment and the use of the microscope, to afford a general view of the structure and functions of plants and animals, and to present an outline of the more important biological theories, such as evolution, natural selection, variation, mutation, and heredity. After the first term Botany 1 and Biology 1 are identical and the classes are combined.

Three hours. Six hours of attendance. Through the year. Elective for Undergraduates. *Mon., Tu., Th., 2.20 to 4.20.*

[2.* *Histology and Physiology*]

Minute structure and special functions of plants and their tissues, embryology, cytology, glycerin and paraffin technic, etc. The work of the third term can be arranged to meet the more special needs of students intending to take up either medicine or forestry. Certain portions of this course may, with the approval of the instructor, be continued by Juniors, Seniors, and Graduates, in course 6.

Three hours. Six hours of attendance. Through the year. Elective for Sophomores, Juniors, and Seniors, who have credit for 1, and for approved Graduates. Not offered in 1910–11. To be offered in 1911–12. Alternates with 3, 4, 5.

‡ Students preparing for teaching or for botanical positions in the government or state experiment station service are advised to supplement courses 1, 2 and 3, 4, 5 with advanced or special work in course 6.

3, 4, 5. *Comparative Morphology*

Intended to give a general view of the evolution and classification of plants by a comparative study of the life-histories of certain types. First term, algae and fungi. Second term, mosses, ferns, etc. Third term, seed plants. Certain portions of this course may, with the approval of the instructor, be continued by Juniors, Seniors, and Graduates, in course 6.

Three hours. Six hours of attendance. Through the year. Elective for Sophomores, Juniors, and Seniors, who have credit for 1, and for approved Graduates. Not to be offered in 1911–12. Alternates with *2. Mon., Wed., Fri., at 12.20.*

6.* *Advanced Course*

Arranged to meet the requirements of individual students. May be taken in successive years if previous work is not duplicated. Students electing this course should plan it definitely, in consultation with the instructor, before June 1 of the preceding academic year. Advanced or research work upon almost any phase of botany may be chosen by students who are properly qualified.

One to three hours. Two to six hours of attendance. Through the year. Elective for Graduates, and for approved Juniors and Seniors. Graduates may, with the consent of the instructor, elect the course for more than three hours.

7. *Trees*

Identification of native and introduced trees; characteristic structure of the more common kinds of wood. Lectures and field work. The required field trips will take place in the afternoon unless otherwise specially arranged, the number depending somewhat upon the length of the individual trips and the amount of work accomplished.

One hour. Two hours of attendance. Third term. Required in the Senior year of candidates for the degree of Bachelor of Science in Civil Engineering. Elective for Undergraduates. *Wed. at 8.*

VI. CHEMISTRY

JOHN HOWARD APPLETON, A.M., Sc.D., *Newport-Rogers Professor of Chemistry*

JOHN EMERY BUCHER, PH.D., *Associate Professor of Organic Chemistry*

MOSES LEVEROCK CROSSLEY, Sc.M., *Instructor in Chemistry*

NORMAN EDWARD HOLT, PH.B., *Instructor in Chemistry*

ROBERT FOSTER CHAMBERS, Sc.M., *Assistant in Chemistry*

ALBERT POTTER FARWELL, PH.B., *Assistant in Chemistry*

1, 2, 3. *Descriptive Chemistry*‡

Non-metals; metals, their metallurgy, compounds, and practical applications; theoretical chemistry. Lectures with experiments; written exercises; individual laboratory work. *Professor* BUCHER, *Messrs.* HOLT *and* CHAMBERS.

Three hours. Through the year. Elective for Undergraduates. *1st div. Mon., Th., at 10.20; 2d div. Tu., Fri., at 10.20; 3d div. Wed., Sat., at 11.20.* Laboratory hours to be arranged with the instructor.

4, 5. *Qualitative Analysis*

First term, properties of the metallic elements; their separation from certain of their compounds. Laboratory work; recitations in qualitative analysis and in chemical philosophy; exercises in stoichiometry. Second term, the principal non-metals and the acids formed by them; methods of separation and recognition of acids and acid radicles. *Professor* APPLETON *and Mr.* CROSSLEY.

Three hours. Six hours of attendance. First and second terms. Elective for Juniors who have credit for 1, 2, 3.‡ *1st div. Fri. at 11.20; 2d div. Sat. at 10.20.* Laboratory hours to be arranged with the instructor.

6. *Quantitative Analysis*

Quantitative precipitations and separations of the most important elements and compounds; the principles upon which quantitative ap-

‡ Credit for the entrance requirement in Chemistry admits only to 1, 2, 3, which may be taken also without previous preparation. Students who wish to enter more advanced courses without taking 1, 2, 3 must pass a special test at the time of the entrance examination in Chemistry. This test will cover the following topics: 1. All of the non-metals with their principal compounds and the processes of manufacture of the chief commercial products from non-metals. 2. About thirty important metals, their occurrence, preparation from the ore, the preparation and uses of their chief compounds. 3. The general principles of chemical action which depend upon physical laws. 4. Methods of making chemical computations of moderate difficulty.

Preparation for this test may require the equivalent of six hours a week for one school year.

paratus is constructed; chemical philosophy and stoichiometry continued. Chiefly laboratory work. *Professor* APPLETON *and Mr.* CROSSLEY.

Three hours. Six hours of attendance. Third term. Elective for Juniors who have credit for 4, 5. *1st div. Fri. at 11.20; 2d div. Sat. at 10.20.* Laboratory hours to be arranged with the instructor.

7, 8, 9. *Quantitative Analysis, Advanced Course*

Assaying of metallic ores; analysis of agricultural materials; testing of chemicals used in textile establishments, etc. *Professor* APPLETON *and Mr.* CROSSLEY.

Six hours. Twelve hours of attendance. Through the year. Elective for Seniors and Graduates who have credit for 6. Laboratory hours to be arranged with the instructor.

10, 11, 12. *Organic Chemistry*

Preparation and analysis of representative organic compounds. Lectures, recitations, and laboratory work. *Professor* BUCHER *and Mr.* HOLT.

Six hours. Through the year. First and second terms, three lectures a week and three laboratory periods a week. Elective for approved Juniors, Seniors, and Graduates. *Mon., Th., Fri., at 9.20.*

13. *Assaying*

Professor APPLETON *and Mr.* CROSSLEY.

Six hours. Twelve hours of attendance. Third term. Elective for Seniors and Graduates who have credit for 1–6.

14. *Organic Dyes*

The chemistry and use of mordants, dyes, etc. *Professor* APPLETON *and Messrs.* CROSSLEY *and* FARWELL.

Six hours. Twelve hours of attendance. Third term. Elective for approved Seniors and Graduates.

15, 16, 17. *Industrial Chemistry*

Lectures and laboratory work. *Professor* APPLETON.

Three to six hours. Six to twelve hours of attendance. Through the year. Elective for approved Graduates. Each term may be elected independently.

[18, 19, 20. *Physical Chemistry*]

Lectures and laboratory work. *Professor* BUCHER.

Three hours. Through the year. Elective for approved Juniors, Seniors, and Graduates. Not offered in 1910–11.

21, 22. *Organic Chemistry, Advanced Course*
Professor BUCHER.
Three hours. First and second terms. Elective for approved Graduates.

23. *Inorganic Chemistry, Advanced Course*
Professor BUCHER.
Three hours. Third term. Elective for approved Juniors, Seniors, and Graduates.

24, 25, 26. *Organic Preparations, Advanced Course*
Professor BUCHER.
Three hours. Through the year. Elective for approved Juniors, Seniors, and Graduates.

27, 28, 29. *Inorganic Preparations, Advanced Course*
Professor BUCHER.
Three hours. Through the year. Elective for approved Juniors, Seniors, and Graduates, who have credit for 10, 11, 12.

30, 31, 32. *Research Work in Chemistry*
Professor BUCHER.
Three hours or more. Through the year. Elective for Graduates.

33, 34, 35. *Conference on Special Topics in Chemistry*
Professor BUCHER.
One hour. Through the year. Elective for approved students.

36, 37, 38. *Conference on Special Topics in Chemistry*
Professor APPLETON.
One hour. Through the year. Elective for approved students.

41, 42, 43. *Industrial Chemistry and Research*
Professor APPLETON.
Three hours or more. Through the year. Elective for Graduates.

VII. CIVIL ENGINEERING‡

JOHN EDWARD HILL, C.E.M., Sc.D., *Professor of Civil Engineering*
ARTHUR HORACE BLANCHARD, C.E., A.M., *Associate Professor of Civil Engineering*
HENRY BERNARDIN DROWNE, C.E., *Instructor in Civil Engineering*

4, 5, 6. *Surveying, Elementary Course*

Theory and practice of plane surveying; use of tape, compass, level, and transit; adjustment of instruments. Lectures, recitations, field work, and drafting. *Professors* HILL *and* BLANCHARD, *Mr.* DROWNE.

Three hours. One hour of recitation and usually six hours of field work or drafting. Through the year. Elective for students who have credit for Mathematics 2 or 18, and for Mechanical Drawing 2 or 6. *Fri. at 2; Mon., Th., 2 to 5.*

7. *Topographical Drawing*

Pen topography; contour drawing; conventional signs. *Mr.* DROWNE.

One hour. Two hours of drafting. Second term. Not elective. *Wed., 2.20 to 4.20.*

8, 9. *Surveying, Advanced Course*

Topography; city surveying; use of stadia, plane table, and barometer; precise base-line measurements with steel tape. Methods as in 4, 5, 6. *Professors* HILL *and* BLANCHARD, *Mr.* DROWNE.

Three hours and two hours. Second term. Course 8 is taken during the spring recess. Elective for students who have credit for 4. *Wed., Fri., at 2.*

10, 11, 12, 13. *Railroad Engineering*

Theory, location, construction, and economics of railroad engineering. Lectures, recitations, field work, and drafting. Third term, railroad curves and practical problems. First term, actual location of a line about two miles long, map, and estimate of cost. Second term, railroad track and track work; maintenance of way department; economics of location. First term, earthwork and its cost; rock excavation; tunneling. *Professor* HILL *and Mr.* DROWNE.

Three, four (eight hours of field work), three, and three hours. Third, first, second, and first terms. Courses 10 and 11 are elective for students who have credit for Mathematics 2 or 18, and who have credit for or are taking 6. Courses 12 and 13 are elective for Juniors and Seniors. Third term, *Mon.*,

‡ All the courses in this department except 16 are required of candidates for the degree of Bachelor of Science in Civil Engineering; all except 7 and 32 and 35 are elective for other students.

Th., Sat., at 8. First term, *Wed., 8 to 5.* Second term, *Tu., Wed., Sat., at 9.20.* First term, *Mon., Th., at 10.20; Fri., 3.20 to 5.20.*

14. *Hydraulic Engineering* ‡‡

Consideration of water supply mainly from a sanitary standpoint. A general course designed to give the chemical and biological aspects of water supply without laboratory work. Lectures, recitations, and seminary work. *Professor* Hill.

Three hours. Second term. Elective for Juniors and Seniors. *Tu., Fri., Sat., at 10.20.*

15. *Geodesy*

Problems in geodetic surveying, with sufficient theory for a proper understanding of the formulae used. Lectures and computations. *Professor* Hill.

Three hours. One hour of recitation and five hours of computation. Third term. Elective for students who have credit for 6 and 9, and Astronomy 5. *Th. at 10.20 and 1.20 to 6.20.*

16. *Municipal Improvements*

Economic aspects of sewerage and its relation to social welfare, water works, pavements, etc. *Professor* Hill.

Three hours. First term. Elective for Juniors and Seniors. Offered only if five or more elect the course. *Mon., Th., Fri., at 9.20.*

17. *Hydraulic Engineering* ‡‡

Consideration of water supply mainly from an engineering standpoint. Irrigation, pumps, and pumping machinery; construction of dams and reservoirs. Lectures, recitations, and seminary work. Supplements Mechanics 2, which gives the theoretical treatment of the subject. *Professor* Hill.

Four hours. Third term. Elective for students who have credit for Mechanics 2. *Mon., Wed., Fri., Sat., at 9.20.*

18. *Sanitary Engineering* ‡‡

Theory of sewerage, treatment and disposal of sewage; stream pollution; house drainage and its appliances; garbage collection and disposal. Lectures, recitations, and seminary work. *Professor* Hill.

Four hours. Third term. Elective for students who have credit for Mechanics 2. *Mon., Wed., Fri., Sat., at 10.20.*

‡‡ Courses 14, 17, and 18 cover the general subject of sanitation.

19. *Highway Engineering*

Economics, location, construction, and maintenance of country roads; economics and design of street pavements; dust prevention and preservation of macadam roads; methods of testing road materials; roads and pavements in foreign countries. Lectures, recitations, inspection trips, and seminary work. *Professor* BLANCHARD.

Three hours. Third term. Elective for Sophomores, Juniors, and Seniors. *Mon., Tu., Th., at 8.*

23. *Simple Framed Structures*

The standard forms of simple roof trusses; calculation by analytical methods of stresses due to dead, snow, and wind loads; calculation by analytical methods of stresses in Pratt, Howe, Warren, and parabolic trusses due to dead, wind, uniform live, excess panel live, road roller, and locomotive wheel loads; miscellaneous trusses, skew bridges, cranes, trussed bents, and towers. Lectures, recitations, and seminary work. *Professor* BLANCHARD.

Three hours. First term. Elective for students who have credit for Mechanics 1 or 3. *Mon., Tu., Th., at 9.20.*

24. *Higher Framed Structures*

General analysis of continuous, movable, cantilever, and suspension bridges and three-hinged, two-hinged, and fixed-end arched ribs; calculation of stresses in continuous and non-continuous center-bearing swing bridges; theorem of three moments; deflection of framed structures; theorem of least work. Lectures, recitations, and seminary work. *Professor* BLANCHARD.

One hour. Third term. Elective for students who have credit for 23. *Th. at 10.20.*

25. *Elements of Structural Design*

Center of gravity and moment of inertia of combinations of structural shapes; riveted joints, tension members, compression members, combined direct and bending stresses, secondary stresses, columns under direct and eccentric loading; wooden structures; plate girder, pin-connected, and riveted Pratt truss bridges; construction of viaducts and elevated railroads; steel mill-building and high-building construction; comparison of standard structural specifications. Lectures, recitations, and computations. *Professor* BLANCHARD.

Three hours. First term. Elective for students who have credit for Mechanics 1 or 3. *Mon., Tu., Th., at 8.*

26. *Roof Design and Graphic Statics*

Graphic determination of center of gravity of combinations of structural shapes; determination by graphical methods of moments in beams and stresses in simple roof trusses; determination of shears, moments, and stresses in simply supported bridge trusses by the use of influence lines; complete design, with general drawings, of a fifty to seventy foot roof truss; inspection trips. *Mr.* Browne.

Three hours. One hour of recitation and four hours of drafting. First term. Elective for students who have credit for Mechanical Drawing 1 or 2, and have credit for or are taking 23 and 25. *Tu., 10.20 to 12.20 and 1.20 to 5.20; Wed., 2 to 5.*

27,‡ 28. *Bridge Design*

Determination of stresses in plate girders; design, with general drawings, of a plate girder highway bridge; design, with general drawings, of a Pratt truss railroad bridge. Lectures on American and English shop practice; the esthetic design of bridges, design of standpipes and elevated tanks, and American methods of erection of bridges and structures. Lectures, drawing, computations, inspection trips, and seminary work. *Professor* Blanchard *and Mr.* Browne.

Three hours. Six hours of drafting. Second and third terms. Elective for students who have credit for 26. Second term, *Tu., Th., 1.20 to 4.20.* Third term, *Tu., 10.20 to 12.20 and 1.20 to 5.20.*

29. *Reinforced Concrete Structures*‡

Properties of reinforced concrete; theory and design of reinforced concrete arches in accordance with the elastic theory; theory and design of reinforced concrete beams, columns, retaining walls, dams, foundations, bridges, and culverts; systems of reinforcement; methods of construction; complete design, with drawings, of a fifty-foot reinforced concrete highway bridge; complete design, with drawings, of a reinforced concrete retaining wall. Lectures, recitations, drafting, and computations. *Professor* Blanchard.

Five hours. Three hours of recitation and four hours of drafting. Second term. Elective for students who have credit for Mechanics 1 or 3 and Mechanical Drawing 1 or 2. *Mon., 9.20; Tu., Th., 9.20 to 12.20.*

30. *Masonry Structures*‡

Stone masonry; static and elastic theory of the masonry arch; design, with drawings, of a stone arch; theory and design of masonry piers,

‡ Courses 27, 29, 30 may not be elected separately.

retaining walls, bridge abutments, and high masonry dams; complete design, with drawings, of a high masonry dam. Lectures, recitations, drafting, and computations. *Professor* BLANCHARD.

Two hours. One hour of recitation and two hours of drafting. Second term. Elective for students who have credit for Mechanics 1 or 3 and Mechanical Drawing 1 or 2. *Mon. at 8 and 10.20 to 12.20.*

31. *Foundations*

Soundings and borings, foundation-beds, deposition of concrete under water, timber foundations, coffer-dams, open caissons, Cushing cylinder piers, pile formulae, driving and foundations, pneumatic caissons of wood and steel, open dredging, the Poetsch freezing process, foundations in quicksand, foundations for high buildings. Lectures, recitations, and seminary work. *Professor* BLANCHARD.

Two hours. Second term. Elective for students who have credit for or are taking Mechanics 2. *Tu., Th., at 8.*

32. *Engineering Jurisprudence*

Essential elements of a contract, the parties to a contract, considerations, bids and bidders, work for private parties and public work. Employment of engineers, liability of the engineer as a professional man; when his functions are judicial; when he is a public officer. Real property, water rights, ownership, rights of way, boundaries, incorporeal rights, franchises, and patents. Engineering specifications and accompanying documents. Lectures and discussion of written decisions on typical cases assigned each week. *Professor* BLANCHARD.

Two hours. Third term. Required of candidates for the degree of Bachelor of Science. *Tu., Th., at 9.20.*

34. *Design of Sanitary Works*

Practical applications of the principles of design discussed in courses 17 and 18. Partial design of a sewerage system, water-works system, and filter plant. *Professor* HILL.

One hour. Two hours of drafting and computations. Third term. Elective for students who have credit for or are taking 17 and 18 and have credit for Mechanical Drawing 1 or 2. *Mon., 2.20 to 4.20.*

35. *Thesis*

A thesis is required of all candidates for the degree of Bachelor of Science in Civil Engineering. The thesis must embody either a de-

sign or a review of an engineering plant, appliance, process, or structure, or the results of an experimental investigation.

36. *Hydraulic Surveying*

Methods of surveying applicable to river and harbor work. Methods of measuring and rating the flow of streams. Actual measurement of the discharge of a stream by means of the current meter, weir, and floats. Recitations and field work. *Mr.* Browne.

Two hours. One hour of recitation and two hours of field work. Third term. Elective for students who have credit for 4 and 6 and have taken Mechanics 2. *Mon. at 8; Tu., 8 to 5.20.*

VIII. ECONOMICS‡

Henry Brayton Gardner, Ph.D., *Professor of Economics*
James Marvin Motley, Ph.D., *Associate Professor of Economics*

1. *Elementary Economics*

Affords a general outline of the subject, and serves as an introduction to the more extended and special courses which follow. *Professor* Gardner.

Three hours. First term. Sophomore, Junior, or Senior year. Required of candidates for the degree of Bachelor of Arts; elective for other students. *1st div. Tu., Fri., Sat., at 10.20; 2d div. Mon., Wed., Fri., at 12.20.*

2.* *General Economics*

The development and significance of the more important elements in the existing industrial organization; the principles governing the production, exchange, distribution, and consumption of wealth; the more important practical problems of economic life. Second and third terms, *Professor* Gardner. First term, *Professor* Motley.

Three hours. Through the year. Elective for Juniors and Seniors. *Tu., Fri., Sat., at 10.20.*

[3. *Money and Banking*]

Principles of money and banking; recent monetary and banking history, particularly of the United States; monetary and banking

‡ The courses in this department other than 1 are open only to those students who have credit for Economics 1, Political Science 1, and Social Science 1, which together constitute an introduction to the advanced work of the departments of Social and Political Science and Economics.

systems of leading industrial nations; present monetary and banking problems. *Professor* GARDNER.

Three hours. First and second terms. Elective for Juniors, Seniors, and Graduates. Not offered in 1910–11. To be offered in 1911–12.

4. *Public Finance*

First term, general principles of public finance; revenues and expenditures of leading industrial nations. Second term, financial history of the United States. Third term, local finance; revenues, expenditures, and financial systems of American states and cities. *Professor* GARDNER.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Wed., Fri., Sat., at 11.20.* Not to be offered in 1911–12.

5. *History and Present Tendencies of Economics*

Early economic theories: a critical examination of the theories of the early schools of economists, especially the physiocrats and the early English school, with particular attention to the relation between economic thought and economic life and practice. Recent economic theories: a study of the tendencies of the historical school, the Austrian school, and recent English and American writers. The growth of the principle of monopoly, its influence on the production and distribution of wealth and on the economic well-being of society. *Professors* GARDNER *and* MOTLEY.

Three hours. One session of an hour and a half weekly. Through the year. Elective for Seniors and Graduates who have credit for 2. Hours to be arranged with the instructor.

6. *The Labor Movement*

History and analysis of the trade-union movement; growth of collective bargaining; labor problems in the United States. *Professor* MOTLEY.

Three hours. First term. Elective for Juniors, Seniors, and Graduates. *Mon., Tu., Th., at 11.20.*

7. *Socialism*

A brief review of the historically important socialistic schemes; mainly a study of the modern scientific socialism of Karl Marx and of the resulting socialistic movements. *Professor* MOTLEY.

Three hours. Second term. Elective for Juniors, Seniors, and Graduates. *Mon., Tu., Th., at 11.20.*

[8. *Industrial Corporations*]

Development of the corporate form of business organization; its effects; the problems to which it gives rise. Special emphasis on the recent movements toward combination, and toward state control of corporations, particularly quasi-public corporations. *Professor* GARDNER.

Three hours. Third term. Elective for Juniors, Seniors, and Graduates. Not offered in 1910–11. To be offered in 1911–12.

9. *The Tariff*

The arguments for free trade and protection in relation to the principles of international trade; the history of tariff legislation and its effects in the United States. *Professor* MOTLEY.

Three hours. Third term. Elective for Juniors, Seniors, and Graduates. *Mon., Tu., Th., at 11.20.* Not to be offered in 1911–12.

[10, 11, 12. *Industrial History*]

First term, the chief stages in the development of the industrial life of England, with special emphasis on the origin and development of the existing form of industrial organization. Second term, the more important aspects of the industrial development of the colonies and the United States to 1860. Third term, the growth, organization, and geographical distribution of the main branches of industry since 1860; the relation of the industrial life of the United States to that of the world at large. *Professor* GARDNER.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Not offered in 1910–11. To be offered in 1911–12.

13. *Economic and Commercial Geography*

A study of the physical features of the land; of climate, winds, ocean currents and their relation to man; of the geographical distribution of food-stuffs and raw materials of industry; and of the consequent development of commerce and of civilization in its economic aspects. Lectures and conferences. This course is the same as Geology 12. *Professors* BROWN *and* MOTLEY.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. *Wed., Th., at 10.20.* Conference hours to be arranged with the instructors.

14. *Statistics and Accounting*

First term, principles involved in the statistical method of investigating and presenting economic and social data, with illustrations drawn from those classes of facts, *e.g.* the statistics of population, in

connection with which this method has been most completely developed. Second term, the results and possibilities of the use of the statistical method in the observation of economic phenomena. Third term, the financial operations and statistics of corporations and discussion of the general principles of accounting. *Professor* GARDNER.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 12.20.* Not to be offered in 1911–12.

20, 21, 22. *Investigation of Special Topics*

Intended to train the student in methods of gathering, handling, and presenting data in the study of economic life and problems. Laboratory methods. Students desiring to elect these courses must obtain the consent of Professor Gardner or Professor Motley before the close of the academic year preceding that in which the course is to be taken. *Professors* GARDNER *and* MOTLEY.

Three hours. Six hours of attendance. Through the year. Elective for approved Juniors, Seniors, and Graduates. Each term may be elected independently.

IX. EDUCATION‡

WALTER BALLOU JACOBS, A.M., *Professor of the Theory and Practice of Education*

ROBERT FRANCIS SEYBOLT, PH.B., *Assistant in Education*

1. *History of Education*

Education among the early culture peoples as forming and perpetuating their civilization; the development of education in Greece and Rome as parallel to the development of thought and learning; early Christian education; the Renaissance and humanism; the rise of realism in thought and education. The history of education considered from the point of view of the history of civilization.

‡ Courses 1, 2, and 3 treat education in its relation to the individual and to the social and political whole; interest in them is therefore not limited to those who intend to teach. At the same time they form an introduction to the more advanced courses in Education. Those who intend to teach are advised to elect these courses during the Junior year.

Courses 1–6 cover the usual requirements for certificates of the First Grade except where practice teaching or experience is demanded. In Rhode Island a certificate is required of all teachers in schools supported in whole or in part by public money. Certificates of the First Grade are granted without examination to those who have completed courses 1-6 and hold a college degree. Due credit is also given for separate courses.

Certificates, authorizing the holders to teach in the evening schools of the state, are issued without examination to students who have completed three years of regular work, including Education 1–3.

Three hours. First term. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 12.20.*

2. *Critical Study of Modern Education*

The beginnings of modern education; the naturalistic movement—Rousseau; the psychological movement—Pestalozzi, Froebel, Herbart; the scientific movement—Spencer; recent sociological tendencies; industrial education; the present status of higher education; problems which an adequate theory of education must solve.

Three hours. Second term. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 12.20.*

3. *Fundamental Principles of Education*

The meaning and aim of education; the function of education as a social institution; the physical conditions of education; the aim of instruction; apperception; the choice and arrangement of studies; the principles of method; the use of the type in instruction; the training of the will; moral education.

Three hours. Third term. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 12.20.*

4. *Psychology of Education*

Theory and process of mental development, with special emphasis upon the period of adolescence; psychology of method, and of the various studies and disciplines; ways in which student and teacher may utilize a knowledge of the more fundamental activities of the mind.

Three hours. First term. Elective for Seniors and Graduates who have credit for 1, 2, or 3, or who are taking 1. *Mon., Tu., Th., at 11.20.*

5. *Hygiene of Education*

A study of bodily growth and development; special emphasis upon the period of adolescence; play and fatigue; physical culture and athletics; arrested growth; the conditions and surroundings which favor or retard normal development; the hygiene of mind; school hygiene.

Three hours. Second term. Elective for Seniors and Graduates who have credit for 1, 2, or 3, or who are taking 2. *Mon., Tu., Th., at 11.20.*

6. *Practical Introduction to Teaching*

The method of the recitation; management and discipline of classes; observation of good teaching; practical applications of method.

Three hours. Third term. Elective for Seniors and Graduates who have credit for or are taking other courses in Education. *Mon., Tu., Th., at 11.20.*

7, 8, 9. *Method in Secondary School Studies and the Organization, Equipment, and Management of Secondary Schools*‡

Administration of secondary education; importance and meaning of secondary school studies; their organization into a curriculum; method as applied to each subject; the resources at the command of the teacher. The following studies receive special attention: first term, Latin and Modern Languages; second term, History and English; third term, Science and Mathematics.

Three hours. Two hours of class-room attendance. Through the year. Required of student-teachers. Elective for Graduates and experienced teachers; also by special permission for a limited number of Seniors. *Wed., 3.20 to 5.20.* Each term may be elected independently.

10, 11, 12. *Problems in Practical Teaching; Secondary Schools*‡

Practice teaching in the Providence High Schools under experienced teachers. Observation, reports, and conferences. Designed for those who wish to become instructors in colleges, teachers or principals in secondary schools, or superintendents of schools.

Three hours. Through the year. Elective for Graduates who have credit for elementary courses in Education and who are taking 7, 8, 9 and 16, 17, 18; also by special permission for a limited number of Seniors. *Fri. at 3.20*, and at other hours to be arranged.

13, 14, 15. *Problems in Practical Teaching; Grammar Grades*‡

Practice teaching in the Providence Grammar Schools under experienced teachers. Observation, reports, and conferences. Designed especially for those who wish to become grade teachers, principals of grammar schools, or superintendents of schools, but also for those who wish to teach in secondary schools. The following studies receive special attention: first term, Arithmetic; second term, Language; third term, History and Geography.

Three hours. Through the year. Elective for Graduates who have credit for elementary courses in Education and who are taking 16, 17, 18; also by special permission for a limited number of Seniors. *Mon. at 3.20*, and at other hours to be arranged.

16, 17, 18. *Seminary in Education*‡

Deals with those educational problems which are arousing discussion during the current year, social as well as institutional, elementary as

‡ In connection with this course, and for an explanation of the work of student-teachers, see page 179.

well as advanced. Reviews of current publications and studies of special topics assigned for presentation before the seminary. In these assignments the needs and interests of individuals are considered. The course should be of special interest to experienced teachers and advanced students of educational and social problems. As the subjects are not repeated, the course may be elected for successive years. For 1910–11 the subjects are: first term, Recent Contributions of Educational Psychology; second term, Social and Industrial Phases of Education; third term, The Administration of Education.

Three hours. Through the year. Two hours of class-room attendance. Required of student-teachers. Elective for Graduates and experienced teachers; also by special permission for a limited number of Seniors. *Sat., 10.20 to 12.20.* Each term may be elected independently.

X. ENGLISH ‡

Walter Cochrane Bronson, A.M., Litt.D., *Professor of English Literature*

Lindsay Todd Damon, A.B., *Professor of English Literature and Rhetoric*

Albert Knight Potter, A.M., *Associate Professor of the English Language*

George Wyllys Benedict, Ph.D., *Associate Professor of English*

Thomas Crosby, A.M., *Associate Professor of English and Public Speaking*

Henry Barrett Huntington, A.B., *Associate Professor of English*

Howard Bristol Grose, Jr.,† Ph.B., *Instructor in English*

William Thomson Hastings, A.M., *Instructor in English*

Stanley Bates Harkness, A.B., *Instructor in English*

Lawrence Rich Grose, A.M., *Assistant in English*

Walter Brooks Henderson, Ph.B., *Assistant in English*

Farnham Bishop, A.M., *Assistant in English*

1. *Rhetoric and Composition*

Lectures and recitations upon the principles governing prose style, prescribed reading and themes. Designed to give the student a clear

‡ Credit for English 1 is a prerequisite for admission to all other courses in the department. The requirement in English Literature for the degree of Bachelor of Arts may be satisfied by taking 10, 11, 14, 15, 19, or 20.

† On leave of absence during the academic year 1910–11.

and correct style and some critical standards. *Professors* DAMON *and* BENEDICT, *Messrs.* HASTINGS, HARKNESS, GROSE, HENDERSON, *and* BISHOP.

Three hours. Through the year. Required of all Freshmen. *1st, 2d, 3d, and 4th div. Mon., Tu., Th., at 11.20; 5th, 6th, 7th, and 8th div. Mon., Wed., Fri., at 12.20; 9th and 10th div. Tu., Th., Fri., at 3.20.* Students repeating the course must enter division 8.

2.* *English Composition, Second Course*

Lectures, recitations, and prescribed reading; weekly themes and other written exercises. Intended to supplement the training given in 1, and to develop further the power of exact and lucid statement. *Mr.* HASTINGS.

Three hours. Through the year. Elective for Sophomores. *Mon., Wed., Th., at 10.20.*

3.* *English Composition, Advanced Course*

Frequent practice in composition and criticism. Intended to develop ease of style and clarity and vigor of thought. *Professor* BENEDICT.

Three hours. Through the year. Elective for Juniors and Seniors and, with the permission of the instructor, for Sophomores who have attained the grade of C in 1. With the consent of the instructor the course may be repeated. *Mon., Tu., Th., at 2.20.*

4.* *Argumentative Composition*

Lectures on the principles and forms of argumentative composition; frequent practice in brief-drawing and the writing of forensics and less formal arguments. Intended to develop the power of handling argumentative topics cogently and persuasively. *Professor* HUNTINGTON.

Three hours. Through the year. Elective for Juniors and Seniors. *Mon., Wed., Th., at 10.20.*

5. *Argumentative Composition*

The principles and forms of brief-drawing and forensic writing. Lectures, written exercises, briefs, and forensics. Intended to furnish a more rapid training than 4, for students who wish to begin debate as early as possible or to go quickly over the fundamentals of argumentative composition. *Professor* HUNTINGTON.

Three hours. Two hours of attendance. First term. Elective for Juniors and Seniors. Not elective for students who have taken 4. *Mon. at 3.20; Fri. at 2.20.*

6.* *Debate*

Intended to train students in correct and vigorous oral presentation of ideas. *Professor* HUNTINGTON, *with the coöperation of the Professors of Economics, Social and Political Science, History, and Public Speaking.*

Three hours. Second and third terms. Elective for a limited number of Juniors and Seniors who have credit for 5, or for one or more terms of 4. With the consent of the instructor the course may be repeated. *Mon., 3.20 to 5.20; Fri., 2.20 to 4.20.*

7. *Public Speaking*

Principles of voice culture; vocal interpretation of literature; extempore speaking. *Professor* CROSBY.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. *Wed., Fri., Sat., at 11.20.*

8. *Public Speaking, Advanced Course*

Practice in reading lyric, narrative, and dramatic literature, in extempore speaking, and in the composition and delivery of the common forms of the occasional address. Special attention to securing right tone-production and to improvement in speech. *Professor* CROSBY.

Three hours. Through the year. Elective for students who have attained the grade of C in 7. *Mon., Tu., Th., at 11.20.*

9. *Old English*

Essentials of Anglo-Saxon grammar; prose selections; Béowulf. *Professor* POTTER.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Fri., at 4.20.*

10. *Chaucer*

Careful reading of most of Chaucer's works; study of Middle English grammar, with some attention to the development of Modern English. *Professor* BENEDICT.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Fri., at 3.20.*

11. *English Literature from the Beginning to the Present Time*

An outline course in the history of English literature, with reading and study of the greater writers. *Professor* BRONSON.

Three hours. Through the year. Elective for Sophomores. *Tu., Th., Sat., at 12.20.*

13. *History of the Drama in England*

The drama as a literary type and its history in England to 1642. *Professor* POTTER.

Three hours. Two meetings a week, and a third meeting at the pleasure of the instructor. Through the year. Elective for students who have credit for any one of the courses from 10 to 23 inclusive. *Tu., Th., Sat., at 12.20.* Not to be offered in 1911–12.

[18. *The Modern English Drama*]

Preliminary study of Elizabethan plays; reading and study of the greater playwrights from 1642 to the present day

Three hours. Through the year. Elective for students who have credit for any one of the courses from 10 to 23 inclusive. Not offered in 1910–11.

[14. *Shakspere*]

Careful study of a few plays with special attention to exact interpretation.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. Not offered in 1910–11.

15. *Shakspere*

Shakspere as dramatist and poet; reading of all the plays. *Professor* POTTER.

Three hours. Through the year. Elective for Juniors and Seniors. *Tu., Fri., Sat., at 10.20.*

16. *English Literature exclusive of the Drama, from 1600 to 1660*

The decline of the Elizabethan spirit; Puritanism and Anglicanism in literature; the "metaphysical" and mystical poets; the cavalier lyrists; all the English poems and some of the prose works of Milton. *Professor* BRONSON.

Three hours. Through the year. Elective for students who have credit for any one of the courses from 10 to 23 inclusive. *Mon., Wed., Fri., at 12.20.* Not to be offered in 1911–12.

17. *English Literature from 1660 to 1798*

The Restoration drama; the classical school; development of the

essay and the novel; the beginnings of romanticism. *Professor* DAMON.

Three hours. Two meetings a week, and a third meeting at the pleasure of the instructor. Through the year. Elective for students who have credit for any one of the courses from 10 to 23 inclusive. *Mon., Tu., Th., at 11.20.* Not to be offered in 1911–12.

19. *English Literature from 1798 to 1832*

The romantic revolt in its critical and imaginative phases; influence of the French revolution; individualism in form and spirit. *Professor* HUNTINGTON.

Three hours. Two meetings a week, and a third meeting at the pleasure of the instructor. Through the year. Elective for Sophomores, Juniors, and Seniors. *Tu., Wed., Sat., at 9.20.*

20. *English Literature from 1832 to 1892*

The Victorian period; modifications of romanticism in prose and poetry; realism; the influence of science and democracy; tendencies at the end of the century. *Professor* DAMON.

Three hours. Two meetings a week, and a third meeting at the pleasure of the instructor. Through the year. Elective for Sophomores, Juniors, and Seniors. *Mon., Wed., Th., at 10.20.*

[22. *American Literature*]

American literature from the beginning, in its relation to American life and to English literature. *Professor* BRONSON.

Three hours. Two meetings a week, and a third meeting at the pleasure of the instructor. Through the year. Elective for students who have credit for 11, 19, or 20. Not offered in 1910–11.

23. *Seminary in English Literature*

Subject for 1910–11: Studies in the historical development of English lyrical and pastoral poetry. *Professor* BRONSON.

Three hours. Two hours of attendance. Through the year. Elective for Graduates, and for a limited number of Seniors who have attained the grade of C in two of the courses from 9 to 22 inclusive.

XI. GEOLOGY‡

Charles Wilson Brown, A.M., *Assistant Professor of Geology*
Nelson Clark Dale, A.M., *Assistant in Geology*

3. *General Geology*

A discussion of the origin, weathering, and metamorphism of rocks; of other agencies that have affected the formation and development of the earth and its crust; of certain land-forms and the stages of their development; a historical review of earth changes, with special reference to the development of the North American continent; the types of life characteristic of the periods of the past, and the principles of organic evolution they illustrate. Lectures, illustrated by models and lantern views. About one third of a term will be devoted to laboratory work. Two field trips will be taken in the first term and three in the third term. *Professor* Brown *and Mr.* Dale.

Three hours. Through the year. Elective for Undergraduates, except Sophomores who elect 1. *Tu., Fri., Sat., at 10.20.*

[6. *Dynamical and Structural Geology*]

An advanced course dealing with sedimentary formations old and new; with mineral veins, folds, faults, mountain-making, and other characteristics of crustal movements; and with the nature and results of igneous and metamorphic activities.

Three hours. One term. Offered if applied for. Elective for students who have credit for 3 or 16. Not offered in 1910–11.

1. *Mineralogy and Petrography*

Discussion of crystal forms and the laws of crystallography; the more common minerals and ores and their recognition and determination by their physical properties and by blow-pipe analysis; study of the optical properties of the rock-forming minerals under the polarizing microscope; the exact determination of rocks; a discussion of the fundamental principles of the origin and classification of rocks and ores. Lectures and laboratory work. *Professor* Brown *and Mr.* Dale.

‡ Students who wish a general view of the geologic processes concerned in the development of the earth and its life should take course 3. Those who contemplate teaching physical geography should take also courses 12, 9, 8, 13. Students who desire to specialize in mining engineering, geology, or geography, in order to teach or to obtain appointment on government or state geological surveys, are advised to elect first the work in general geology and to follow it with courses 1, 11, 9, 8, 6, 12, 13, approximately in the order given.

Three hours. Six hours of attendance. Through the year. Elective for Sophomores who do not elect 3, and for Juniors and Seniors. *Tu., Th., at 11.20.*

9, 8, 11. *Field Geology*

Geological maps, their use and methods of construction; practice in the actual working out of the surface geology and stratigraphy of an assigned definite area. Field work and reports. *Professor* Brown *and Mr.* Dale.

Three hours. Through the year. One conference hour and the equivalent of six hours' work in the field-area. The first term may be taken independently and is elective for students who have credit for 3 or 16; the first and second terms may be elected as a two-term course; the third term may be elected independently by students who are taking 3 or 16.

17, 16. *Engineering Geology*

A discussion of the geologic processes and results that are closely related to engineering problems. Lectures, laboratory and field work. Two field trips in the first term and three in the third term are required, with detailed notes of the regions visited. *Professor* Brown *and Mr.* Dale.

Two hours (four hours of attendance), three hours. First and third terms. Required in the Junior year for the degree of Bachelor of Science in Civil Engineering. Not elective. *Tu., 9.20 to 11.20; Fri., 10.20 to 12.20; Mon., Wed., Fri., at 10.20.*

12. *Economic and Commercial Geography*

A study of the physical features of the land; of climate, winds, ocean currents, and their relation to man; of the geographical distribution of food-stuffs and raw materials of industry; and of the consequent development of commerce and of civilization in its economic aspects. Lectures and conferences. This course is the same as Economics 13. *Professors* Brown *and* Motley.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. *Wed., Th., at 10.20.* Conference hours to be arranged with the instructors.

13. *Geographic Seminary*

Discussions and reports on advanced problems of geography. In 1910–11, the general topic will be the Geography of the Eastern Hemisphere. *Professor* Brown.

Three hours. One hour of attendance. Through the year. By special arrangement with the instructor, the course may be taken for a shorter period. Elec-

tive for Graduates, and for Undergraduates who have credit for the first term's work in 12 or an equivalent. *Sat. at 11.20.*

14. *Geologic Investigation*

Research work in the field and the laboratory, arranged to meet the needs of individual students. *Professor* BROWN.

One to six hours. Through the year. By special arrangement with the instructor, the course may be taken for a shorter period. Elective for Graduates, and for approved Undergraduates.

15. *Conservation of Natural Resources*

A study of the conservation, utilization, and the prevention of the waste of natural resources, such as deposits of ores, fuels, road and building materials; soils, their reclamation by drainage, irrigation, or other treatment; water resources, including the storage of surplus waters for water-supply and water-power; the relation between drainage, and rainfall and forestation; stream-erosion and deposition in relation to navigation; reservations for parks, game, forests, and drainage basins. *Professor* BROWN.

Three hours. Second term. Elective for Juniors and Seniors who have credit for 3, 1, or 12. *Mon., Tu., Th., at 11.20.* Alternates with 6.

XII. GERMANIC LANGUAGES AND LITERATURES‡

CAMILLO VON KLENZE, PH.D., *Professor of the Germanic Languages and Literatures*

ASA CLINTON CROWELL, PH.D., *Associate Professor of the Germanic Languages and Literatures*

ROBERT MCBURNEY MITCHELL, A.B., *Instructor in German*

JOHN HERBERT BACHMANN, A.M., *Instructor in German.*

1. *Introductory Course*

Reading, grammar, composition, conversation, dictation, sight reading. *Professor* CROWELL, *Messrs.* MITCHELL *and* BACHMANN.

Three hours. Through the year. Required of all students who did not present German for admission. *1st div. Tu., Wed., Sat., at 9.20; 2d div. Mon., Th., Fri., at 9.20; 3d div. Tu., Th., Sat., at 12.20; 4th div. Mon., Tu., Th., at 2.20.*

‡ Students wishing recommendations from the department to teach German must pass a special examination designed to test their ability to write and to understand German, and, to some extent, to use the spoken language.

2. *Intermediate Course*

Reading of modern German stories of the type found in Batt and Allen's *German Stories,* volumes 1 and 2, lyrics (von Klenze or Hatfield), and one or two dramas of the classical period. Review of grammar; composition; conversation based upon the texts read. *Messrs.* MITCHELL *and* BACHMANN.

Three hours. Through the year. Required of all Freshmen who presented elementary German for admission. Not elective for students who have taken German in college. *1st div. Wed., Fri., Sat., at 11.20; 2d div. Tu., Fri., Sat., at 10.20; 3d div. Mon., Wed., Th., at 10.20.*

3, 4, 5. *Reading Course*

Reading of modern German stories of the type found in Batt and Allen's *German Stories,* volumes 1 and 2, lyrics (von Klenze or Hatfield), and two dramas illustrating respectively the classical and the modern period, for example, Schiller's *Maria Stuart* and Hebbel's *Agnes Bernauer.* Review of grammar; composition; conversation based upon the texts read. *Professor* CROWELL.

Three hours. Through the year. Elective for students who have credit for 1. *Mon., Wed., Th., at 10.20.*

6. *Modern Prose*

Aims to train the student in reading, speaking, writing, and understanding modern German. Reading of texts selected from fiction, history, and science; for example, Liliencron, Keller, Freytag, Helmholtz, Nichols's *Modern German Prose,* Paszkowski's *Lesebuch zur Einführung in die Kenntnis Deutschlands und seines geistigen Lebens,* 4th ed., and a text (such as Mosher's *Willkommen in Deutschland*) to introduce the student to the actual language of modern daily life. Talks in German; oral and written reports in German; letter-writing, composition, and conversation. *Professor* VON KLENZE *and Mr.* BACHMANN.

Three hours. Through the year. Elective for students who have credit for 2, or 3, 4, 5, or 7, or who presented advanced German for admission. *Tu., Fri., Sat., at 10.20.*

7. *Advanced Course in Standard Authors, Classical and Modern*

One drama of Goethe or Schiller, one drama of Grillparzer, one drama of Hebbel, von Klenze's *Deutsche Gedichte,* Sudermann's *Frau Sorge.* Talks in German on the history of German literature; oral and written reports in German. *Mr.* MITCHELL.

Three hours. Through the year. Elective for students who have credit for 2, or who presented advanced German for admission. *Mon., Tu., Th., at 11.20.*

[23, 24, 25. *German Lyrical Poetry*]

Introduces the student to the various aspects of the inner life of the German people as reflected in the lyrical poetry of the last two centuries. Lectures in German; oral and written reports in German.

Three hours. Through the year. Elective for students who have credit for 5 or 7, or who presented advanced German for admission; also for other approved students. Each term may be elected independently. Not offered in 1910–11.

26, 27, 28. *The German Short Story*

The development of the short story into an art form. The study of the "Novelle" as represented by Kleist, Ludwig, Heyse, C. F. Meyer, Keller, and others, with frequent reference to the chief writers of the short story of Italy, France, England, and America. Lectures and reports in German and English. *Professor* VON KLENZE.

Three hours. Through the year. Elective for students who have credit for 2, 5, 6, or 7. *Wed., Fri., Sat., at 11.20.*

[29, 30, 31. *The German Drama of the Nineteenth Century*]

Kleist, Grillparzer, Hebbel, Hauptmann, and Sudermann. A study of the development of the German drama from waning romanticism to realism, with frequent reference to the chief representatives of the modern drama in other countries.

Three hours. Through the year. Elective for students who have credit for 5, 6, or 7. Each term may be elected independently. Not offered in 1910–11.

32. *Lessing and Schiller*

Aims to introduce the student to the dramatic theory and practice of German classicism. Reading of one or two of Lessing's dramatic works and of several of the representative dramas of Schiller, especially *Wallenstein.* Discussion of the dramatic principles of the Greek and of the English drama and of their influence upon Lessing and Schiller, with references to the dramatic theories of the nineteenth century. Lectures and reports in German and English. *Professor* CROWELL.

Three hours. Through the year. Elective for students who have credit for 5, 6, or 7. *Mon., Th., Fri., at 9.20.*

[10. *Goethe's Faust: Parts* 1 *and* 2]
With some notice of recent dramas of kindred interest. *Professor* CROWELL.

Three hours. Through the year. Elective for students who have credit for 5 or 7. Not offered in 1910–11.

[33, 34, 35. *Goethe: A Study of His Life and Works*]
Lectures in German; reports on assigned topics; extensive reading. *Professor* VON KLENZE.

Three hours. Through the year. Elective for students who have credit for 7, 10, or 14. Not offered in 1910–11.

[12, 13, 14. *Outline History of German Literature*]
Aims to acquaint the student with the most important movements in the evolution of German literary life. Lectures in German; reports on assigned topics; extensive reading. *Professor* VON KLENZE.

Three hours. Through the year. Elective for students who have credit for 7 or 10. Not offered in 1910–11.

37, 38, 39. *German Literature in the Nineteenth Century*
A study of the literary life of Germany as an expression of German civilization in the nineteenth century. The literary output — Romantic School, Young Germany, Naturalism, Realism, Neo-Romanticism — will be studied, with frequent references to prominent literary personalities in other domains of intellectual life, such as David Friedrich Strausz, Mommsen, Nietzsche, and Wagner. *Professor* VON KLENZE.

Three hours. Through the year. Elective for students who have credit for 7, 10, 28, or 31. *Tu., Th., Sat., at 12.20.*

16. *Gothic and Old High German*
The Gothic language, with reading of extracts in Streitberg's *Gotisches Elementarbuch* or Braune's *Gotische Grammatik*, Braune's *Althochdeutsche Grammatik* and *Althochdeutsches Lesebuch. Professor* CROWELL.

Three hours. Through the year. Elective for Graduates. *Mon., Tu., Th., 3.20.*

[17. *Germanic Mythology*]
Primitive Germanic religion, customs, and ideas, in their relations to German literature. Discussions based on E. Mogk's *Germanische Mythologie. Professor* CROWELL.

One hour. Through the year. Elective for Juniors, Seniors, and Graduates. Not offered in 1910–11.

[20. *Old Norse*]

Holthausen's *Altisländisches Elementarbuch;* Wilken's *Prosaische Edda; Die Lieder der Edda,* edited by Sijmons and Gering. *Professor* CROWELL.

Two hours. Through the year. Elective for Graduates. Students electing Old Norse should also take Germanic Mythology. Not offered in 1910–11.

[15. *Middle High German*]

The language of the Middle High German period, including an introduction to Germanic philology. Michel's *Mittelhochdeutsches Elementarbuch; Das Nibelungenlied. Professor* VON KLENZE.

Three hours. Through the year. Elective for students who have credit for 7, 10, 14, or 16. Not offered in 1910–11.

36. *Seminary in German Literature*

Aims to give training in modern methods of investigation and criticism. To be conducted in German. *Professor* VON KLENZE.

Three hours. Through the year. Elective for approved students.

XIII. GREEK LITERATURE AND HISTORY‡

JAMES IRVING MANATT, PH.D., LL.D., *Professor of Greek Literature and History*

FRANCIS GREENLEAF ALLINSON,† PH.D., *David Benedict Professor of Classical Philology*

ERNEST TROWBRIDGE PAINE, A.M., *Acting Assistant Professor of Greek*

A, B, C. *Elementary Course*

Designed to cover as much as possible of the entrance requirements in Greek, and thus to enable a student to take 1, 2, and 3 in the following year if he completes by private study before the opening of the first term the entire requirement in the *Anabasis,* and before the opening of the third term the entire requirement in Homer. *Professor* PAINE.

Three hours. Through the year. Elective for students who did not present elementary and advanced Greek for admission. *Tu., Th., Sat., at 12.20.*

3. *Lysias*

Selections from Lysias; selections for sight reading from Herodotus.

‡ Courses 3, 1, 2 are a prerequisite for the more advanced courses in this department.
† On leave of absence during the academic year 1910–11.

Professors MANATT *and* ALLINSON. [This year *Professor* PAINE.]

Three hours. First term. Elective for students who presented elementary and advanced Greek for admission, or who have credit for Greek A, B, C and have done the additional work indicated above. *Tu., Th., Sat., at 12.20.*

1. *Plato*

Plato's *Apology* and *Crito,* with selections from the *Phaedo. Professor* ALLINSON. [This year *Professor* PAINE.]

Three hours. Second term. Elective for students who have credit for 3. *Tu., Th., Sat., at 12.20.*

2. *Homer*

The *Odyssey,* four books; rapid reading of other books; lectures on the life of the Heroic Age as revealed in the poems and illustrated by recent archaeological research. *Professor* MANATT.

Three hours. Third term. Elective for students who have credit for 1. *Tu., Th., Sat., at 12.20.*

35. *Greek Historians*

Selections from Herodotus, Thucydides, and Xenophon, with a general review of Greek History. *Professor* MANATT.

Three hours. First term. Elective for Sophomores. *Mon., Wed., Th., at 10.20.*

4. *Lucian*

Selected writings. *Professor* ALLINSON. [This year *Professor* PAINE.]

Three hours. Second term. Elective for Sophomores. *Mon., Wed., Th., at 10.20.*

6. *Dramatic Poets*

Lectures on the Greek drama. The *Prometheus* of Aeschylus; the *Oedipus Tyrannus* of Sophocles. *Professor* MANATT *or Professor* PAINE.

Three hours. Third term. Elective for Sophomores. *Mon., Wed., Th., at 10.20.*

[8. *Homer*]

Advanced course in the *Iliad* or the *Odyssey,* intended to serve as an introduction to prehistoric archaeology and as a preparation for teaching Homer. *Professor* MANATT.

Three hours. First term. Elective for Juniors and Seniors. Not offered in 1910–11.

[7. *Plato and Aeschylus*]

Republic, Book X; selections from Books I-IX; *Agamemnon. Professor* ALLINSON.

Three hours. Second term. Elective for Juniors and Seniors. Not offered in 1910–11.

[9. *Theocritus and Herondas*]

Twenty *Idylls* of Theocritus and selected *Mimes* of Herondas. *Professor* MANATT.

Three hours. Third term. Elective for Juniors and Seniors. Not offered in 1910–11.

[10. *The Drama*]

The *Medea* of Euripides and the *Frogs* of Aristophanes, with rapid reading of the *Seven against Thebes* of Aeschylus for literary criticism. *Professor* ALLINSON.

Three hours. Third term. Elective for Juniors and Seniors. Not offered in 1910–11.

11. *Herodotus*

A study of Greek history to the beginning of the Athenian Empire. Collateral reading of Aeschylus' *Persae;* and (in translation) Plutarch's *Solon, Themistocles,* and *Aristides. Professor* MANATT.

Three hours. First term. Elective for Juniors and Seniors.

12. *Thucydides*

The Rise and Fall of the Athenian Empire. Collateral reading of Aristophanes' *Acharnians* and *Knights;* and Plutarch's *Cimon, Pericles,* and *Alcibiades. Professor* MANATT *or Professor* PAINE.

Three hours. Second term. Elective for Juniors and Seniors.

[13. *Lucian*]

Advanced course. *Professor* ALLINSON.

Three hours. First term. Elective for Juniors and Seniors. Not offered in 1910–11.

[14. *Aeschines and Demosthenes*]

Speeches on the Crown; study of the Macedonian period and of Athenian political life. *Professor* MANATT.

Three hours. Second term. Elective for Juniors and Seniors. Not offered in 1910–11.

15. *Pindar*

Select Odes. *Professor* MANATT.

Three hours. Third term. Elective for Juniors and Seniors.

[16, 17, 18. *Homer*]

The *Odyssey;* portions of the *Iliad* and the *Hymns* in the original; the remainder of the poems in translation. *Professor* MANATT.

Three hours. Through the year. Elective for Juniors and Seniors. Not offered in 1910–11.

19, 20. *Greek Composition*

Professor PAINE.

One hour. Second and third terms. Elective for Sophomores, Juniors, and Seniors. *Fri. at 2.20.*

21, 22. *Modern Greek*

Introduction to the language; readings from living Greek authors and Greek newspapers. *Professor* MANATT.

One hour. Second and third terms. Elective for Sophomores, Juniors, and Seniors.

23, 24, 25. *Greek Seminary*

Subjects for 1910–11: Hesiod and the Homeric Hymns; the Greek Anthology; Isaeus and Greek historical inscriptions. *Professors* MANATT *and* PAINE.

Three hours. One two-hour session weekly. Through the year. Elective for Graduates and approved Seniors.

[26. *Attic Orators*]

Professor MANATT.

Two hours. First term. Elective for Graduates and approved Seniors. Not offered in 1910–11.

[27, 28. *Homer and Mycenaean Archaeology*]

The Achillean books of the *Iliad* and the Ithacan books of the *Odyssey* studied in the light of recent archaeological discoveries. *Professor* MANATT.

Two hours. First and second terms. Elective for Graduates and approved Seniors. Not offered in 1910–11.

[29. *Demosthenes*]

Private speeches, selected to illustrate the workings of Athenian institutions. *Professor* MANATT.

Three hours. First term. Elective for Graduates. Not offered in 1910–11.

33. *Greek Life*

The private and public life of the Greeks studied in the light of their history, literature, and monuments. Manual, lectures, and prescribed reading, with frequent reports, written tests, and essays. No knowledge of Greek or Latin required. The course is continued in the second and third terms as Latin 28, 29. The three terms together constitute the course in the History of Greek and Roman Life and Institutions, which alternates with Greek 34, Latin 30, and Indo-European Philology 1. *Professors* MANATT *and* PAINE.

Three hours. First term. Elective for Freshmen and Sophomores. *Mon., Tu., Th., at 11.20.*

[34. *Greek Literature*]

A brief history of the literature of the Greeks from Homer to Theocritus, with study of the masterpieces in the best English translations. No knowledge of Greek or Latin required. The course is continued in the second and third terms as Latin 30 and Indo-European Philology 1. The three terms together constitute the course in Greek and Roman Literature and the History of Language, which alternates with Greek 33, Latin 28, 29. *Professor* ALLINSON.

Three hours. First term. Elective for Freshmen and Sophomores. Not offered in 1910–11.

XIV. HISTORY ‡

WILLIAM MACDONALD, PH.D., LL.D., *George L. Littlefield Professor of American History*

WILFRED HAROLD MUNRO, A.M., L.H.D., *Professor of European History*

1. *Medieval and Modern History of Europe*

A general survey of the history of western Europe from the time of the barbarian invasions to the present. A narrative text-book supplemented by lectures, frequent written tests, and written reports and abstracts on assigned reading and topics for special investigation. *Professor* MACDONALD.

Three hours. Through the year. Required of candidates for the degree of Bachelor of Arts or Bachelor of Philosophy in either the Sophomore or the Junior year. *Mon., Tu., Th., at 2.20.*

‡ The elective courses in History are regularly open only to those who have credit for 1; but, by special permission of the instructor, elective courses may be taken by Juniors who are at the same time taking 1.

2. *Spanish History*

Development of Spanish institutions, political and social; rise and greatness of Spain as a European power; its colonial system; its position with reference to the Reformation and the subsequent religious wars. *Professor* MUNRO.

Three hours. First term. Elective for Juniors, Seniors, and Graduates. *Tu., Fri., Sat., at 10.20.*

3. *Islam and the Crusades*

Social and political conditions in Europe and the East at the beginning of the Crusades; organization and internal condition of Islam; effect of the Crusades on the thought, life, and political development of Europe. *Professor* MUNRO.

Three hours. Second term. Elective for Juniors, Seniors, and Graduates. *Tu., Fri., Sat., at 10.20.*

4. *Period of the Renaissance*

Preparation for the Renaissance in the intellectual and social life of Europe; spread of the revival; connection between the Renaissance and the Reformation; artistic and literary aspects of the movement. *Professor* MUNRO.

Three hours. First term. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 12.20.*

5. *Period of the Reformation*

Early movements of dissent from the Roman Church; the Protestant revolt in Germany, Switzerland, France, and England; the political and social aspects of the Reformation; the religious wars; the effect on religious belief and church organization. *Professor* MUNRO.

Three hours. Second term. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 12.20.*

6. *The French Revolution*

Rise and progress of the Revolution in France; political and social conditions in Europe 1789–1815; permanent results of the Revolution, particularly its effect on political thought and practice. *Professor* MUNRO.

Three hours. Third term. Elective for Juniors, Seniors, and Graduates. *Tu., Fri., Sat., at 10.20.*

7. *European History since 1815*

Political development of the more important states and their diplomatic relations; the revolutions of 1830 and 1848; the free-trade movement in England; the achievement of Italian unity; the founding of the German Empire; the Franco-Prussian war; the Eastern question, etc. *Professor* MUNRO.

Three hours. Third term. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 12.20.*

[8, 9, 10. *English Constitutional and Political History to 1689*]

Formation of the English constitution; establishment and growth of the church; relations with Scotland and Ireland; the Reformation; the Puritan Revolution. *Professor* MUNRO.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Each term may be elected independently. Not offered in 1910–11. To be offered in 1911–12.

11, 12, 13. *English Constitutional and Political History since 1689*

Foreign relations; the development of party government and the cabinet system; the social and political changes of the nineteenth century. *Professor* MUNRO.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Each term may be elected independently. *Mon., Tu., Th., at 2.20.*

14, 15, 16. *Seminary in European History*

Discussion of assigned subjects, reports of reading and investigation, and similar exercises. *Professor* MUNRO.

Three hours. One hour of class-room attendance. Through the year. Elective for Graduates. Each term may be elected independently.

[19, 20, 21. *Constitutional and Political History of the United States*]

An advanced course covering the period from 1783 to the present time. Intended primarily for students who wish to specialize in American history or who expect to study law. *Professor* MACDONALD.

Three hours. Elective for Juniors, Seniors, and Graduates. Not offered in 1910–11. To be offered in 1911–12.

22, 23, 24. *Seminary in American History*

Designed to afford training in historical investigation and practice in the use of sources. The subjects vary from year to year, and are drawn from both the colonial and the constitutional periods. For

1910–11 the subjects are: First term, Social and industrial conditions in the United States during the Revolution. Second Term, The Abolition movement. Third term, The South during Reconstruction.

Three hours. One to two hours of attendance. Through the year. Elective for Graduates and approved Seniors. The course should be preceded by 27, 28, 29, or 19, 20, 21, but by special permission it may be taken by students who have credit for 27, 28, 29, and are taking 19, 20, 21.

27, 28, 29. *American History*

A general course, covering the whole period from the beginnings of English colonization to the present time. Lectures, supplemented by assigned reading, study of the texts of representative documents, and special reports. Intended as an introduction to the advanced courses in American history, and for students who wish only a general survey of the subject or who expect to teach history. In 1910–11 special provision will be made in the second and third terms for students who wish to give particular attention to the constitutional aspects of the period. *Professor* MacDonald.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Wed., Fri., Sat., at 11.20.*

25.* *Principles of Historical Criticism and Research*

The general principles of historical criticism and the literature of historical theory. *Professor* MacDonald.

One hour. One term. Elective for Graduates of one year's standing. Required of all candidates for the degree of Doctor of Philosophy in History.

XV. INDO-EUROPEAN PHILOLOGY

Francis Greenleaf Allinson,† Ph.D., *David Benedict Professor of Classical Philology*

[1. *General Introduction to the Study of Language*]

Outline of the history of language; the Indo-European family. Adapted for students of ancient or modern languages. A continuation of Greek 34, Latin 30. The three terms together constitute the course in Greek and Roman Literature and the History of Language.

Three hours. Third term. Elective for Freshmen and Sophomores. Not offered in 1910–11.

† On leave of absence during the academic year 1910–11.

[4. *Seminary in Comparative Philology*]
For advanced students in Greek and Latin.

Three hours. One two-hour session weekly. Third term. Elective for Graduates and approved Seniors. Not offered in 1910–11.

[7, 8, 9. *Sanskrit, Elementary Course*]
Whitney's *Grammar;* Lanman's *Reader;* selections from the *Vedic Hymns.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Not offered in 1910–11.

[10, 11, 12. *Sanskrit, Advanced Course*]
Vedic Hymns, and other selections.

One hour. Through the year. Elective for students who have credit for 7, 8, 9. Not offered in 1910–11.

XVI. MATHEMATICS‡

Nathaniel French Davis, A.M., LL.D., *Professor of Pure Mathematics*

Henry Parker Manning, Ph.D., *Associate Professor of Pure Mathematics*

Roland George Dwight Richardson, Ph.D., *Assistant Professor of Pure Mathematics*

Clinton Harvey Currier,† A.M., *Instructor in Mathematics*

Raymond Clare Archibald, Ph.D., *Instructor in Mathematics*

Frederick Wahn Beal, A.M., *Instructor in Mathematics*

Albert Arnold Bennett, Jr., A.M., *Assistant in Mathematics*

3. *Algebra*

Professors Davis *and* Manning, *Messrs.* Beal *and* Bennett.

Four hours. First term. Required of candidates for the degree of Bachelor of Arts or Bachelor of Philosophy who did not present Solid Geometry and Plane Trigonometry for admission. *One division Mon., Wed., Th., Fri., at 9.20; one division Tu., Wed., Fri., Sat., at 8, the others at 9.20.*

‡ The Undergraduate courses 1–11 should be taken in the order in which they are printed. Courses 17–21 are designed for students who are taking or who intend to take engineering courses. Courses 22–28 are designed for Graduates: two or three of these courses are offered each year according to the needs of the students. For those who have taken all of them, other courses can usually be arranged.

† On leave of absence during the academic year 1910–11.

1. *Solid and Spherical Geometry*

Professors DAVIS *and* MANNING, *Messrs.* BEAL *and* BENNETT.

Four hours. Second term. Required of candidates for the degree of Bachelor of Arts or Bachelor of Philosophy who did not present Solid Geometry and Plane Trigonometry for admission. *One division Mon., Wed., Th., Fri., at 9.20; one division Tu., Wed., Fri., Sat., at 8, the others at 9.20.*

2. *Trigonometry*

Professors MANNING *and* RICHARDSON, *Messrs.* BEAL *and* BENNETT.

Four hours. Third term. Required of candidates for the degree of Bachelor of Arts or Bachelor of Philosophy who did not present Solid Geometry and Plane Trigonometry for admission. *One division Mon., Wed., Th., Fri., at 9.20; one division Tu., Wed., Fri., Sat., at 8, the others at 9.20.*

4. *Analytic Geometry*

Professor DAVIS *and Mr.* BEAL.

Three hours. First and second terms. Required of candidates for the degree of Bachelor of Arts or Bachelor of Philosophy who presented Solid Geometry and Plane Trigonometry for admission. Elective for students who have credit for 3, 1, 2. *One division Mon., Wed., Fri., at 12.20; one division Tu., Sat., at 9.20, Wed. at 8.*

5. *Differential and Integral Calculus*

Professor DAVIS *and Mr.* BEAL.

Three hours. Third term. Required of candidates for the degree of Bachelor of Arts or Bachelor of Philosophy who presented Solid Geometry and Plane Trigonometry for admission. Elective for students who have credit for 4. *One division Mon., Wed., Fri., at 12.20; one division Tu., Sat., at 9.20, Wed. at 8.*

6, 7, 8. *Differential and Integral Calculus*

A continuation of 5. *Professors* DAVIS *and* RICHARDSON.

Three hours. Through the year. Elective for students who have credit for 5. *Tu., Th., Sat., at 12.20.*

9, 10, 11. *Differential Equations*

Professor MANNING.

Three hours. Through the year. Elective for students who have credit for 6 or 21. First term required of candidates for the degree of Bachelor of Science in Electrical Engineering. *Tu., Th., Sat., at 12.20.*

15. *Spherical Trigonometry*

Mr. Beal.

One hour. First term. Required of candidates for the degree of Bachelor of Arts or Bachelor of Philosophy who presented Solid Geometry and Plane Trigonometry for admission. Elective for students who have credit for 2 and who have not taken Spherical Trigonometry. *Mon., Th., at 9.20.*

16. *Algebra*

Mr. Beal.

One hour, first term. Two hours, second and third terms. Required of candidates for the degree of Bachelor of Arts or Bachelor of Philosophy who presented Solid Geometry and Plane Trigonometry for admission. *Mon., Th., at 9.20.*

17. *Algebra*

Professor Richardson, *Dr.* Archibald, *and Mr.* Beal.

Six hours. First term. Required of candidates for the degree of Bachelor of Science. *Mon., Tu., Wed., Th., Fri., Sat., one division at 12.20, the others at 11.20.*

18. *Plane and Spherical Trigonometry*

Professor Richardson, *Dr.* Archibald, *and Mr.* Beal.

Six hours. Second term. Required of candidates for the degree of Bachelor of Science. *Mon., Tu., Wed., Th., Fri., Sat., one division at 12.20, the others at 11.20.*

19. *Analytic Geometry*

Professor Davis, *Dr.* Archibald, *and Mr.* Beal.

Six hours. Third term. Required of candidates for the degree of Bachelor of Science. *Mon., Tu., Wed., Th., Fri., Sat., one division at 12.20, the others at 11.20.*

20. *Differential Calculus*

Professors Davis *and* Richardson.

Five hours. First term. Required of candidates for the degree of Bachelor of Science. *One division Tu., Wed., Th., Fri., Sat., at 9.20; one division Mon., Th., at 8, Tu., Fri., Sat., at 10.20.*

21. *Integral Calculus*

Professors Davis *and* Richardson.

Three hours. Second and third terms. Required of candidates for the de-

gree of Bachelor of Science. *One division Tu., Wed., Sat., at 9.20; one division Tu., Fri., Sat., at 10.20.*

[22. *Function Theory of a Complex Variable*]

Professor MANNING.

Three hours. Through the year. Elective for Graduates and approved Seniors. Not offered in 1910–11.

23. *Differential Equations, Advanced Course*

Professor MANNING.

Three hours. Through the year. Elective for Graduates who have credit for 22.

[24. *Advanced Algebra*]

Professor RICHARDSON.

Three hours. Through the year. Elective for Graduates and approved Seniors. Not offered in 1910–11.

27. *Projective Geometry*

Dr. ARCHIBALD.

Three hours. Through the year. Elective for Graduates and approved Seniors.

28. *Function Theory of a Real Variable*

Professor RICHARDSON.

Three hours. Through the year. Elective by special permission of instructor.

XVII. MECHANICAL ENGINEERING‡

WILLIAM HERBERT KENERSON, M.E., A.M., *Associate Professor of Mechanical Engineering*

THURSTON MASON PHETTEPLACE, M.E., A.M., *Assistant Professor of Mechanical Engineering*

HENRY DEWEES CADY, *Instructor in Shop Practice*

JAMES ALEXANDER HALL, A.B., *Assistant in Mechanical Engineering*

1. *Wood-work*

Exercises in carpentry and wood-turning. Reference reading and presentation of papers. *Mr.* CADY.

‡ All the courses in this department are required of candidates for the degree of Bachelor of Science in Mechanical Engineering. Courses 1–6 are all elective for Sophomores, Juniors, and Seniors, but not more than two of them may be counted towards the degree of Bachelor of Arts or Bachelor of Philosophy.

Three hours in any term. Seven hours of attendance. Elective for Sophomores, Juniors, and Seniors, who have had instruction in drawing.

2. *Wood-work*

Exercises in pattern-making. Reference reading and presentation of papers. *Mr.* CADY.

Three hours. Seven hours of attendance. Third term. Elective for Sophomores, Juniors, and Seniors, who have had instruction in drawing. *Wed., 10.20.* Other hours to be arranged with the instructor.

3, 4, 5, 6. *Metal-work*

Exercises in chipping and filing; the use of machine tools; forging and hardening tools, etc. Reference reading and presentation of papers. *Mr.* CADY.

Three hours in any term. Seven hours of attendance. Elective for Sophomores, Juniors, and Seniors, who have had instruction in drawing.

8. *Kinematics*

Velocity ratios, rolling surfaces, cams, and belting. Recitations, drawing, and the solution of problems. *Professor* PHETTEPLACE.

Three hours. Seven hours of attendance. Third term. Elective for students who have credit for Mechanical Drawing 5. *Tu., 2 to 6; Fri., 2.20 to 5.20.*

9, 10, 11. *Kinematics*

Gearing, linkwork, parallel motions, and gear trains; machine tools; the application of the principles involved. Recitations, drawing, and the solution of problems. *Professor* PHETTEPLACE.

Three hours. Seven hours of attendance. Through the year. Elective for students who have credit for 8 and for Mechanical Drawing 5. *Mon., 2 to 6; Th., 2.20 to 5.20.*

12, 13, 14, 15. *Machine Design*

Applications of the principles of mechanics and the strength of materials to the design of representative types of boilers, engines, and various mechanisms; solution of problems illustrating the method of designing bolts and nuts, keys, journals and bearings, fly-wheels, valve gears, etc. Lectures, calculation, and drawing. *Professor* PHETTEPLACE.

Three hours. Six hours of attendance. First, second, third, and third terms. Elective for students who have credit for 8, 9, 10, 11, and Mechanics 1. *Mon., Th., 10.20 to 1.20.*

16, 17, 18. *Thermodynamics*

Applications of the principles of gases and vapors to steam, gas, and other heat engines, air-compressors, refrigerating apparatus, etc.; discussion of the energy of fuel and the utilization of such energy for power purposes by means of various media; laws of the relation of variations of pressure, temperature, and volume of such media; analysis of the various cycles used in heat engines; the principles of the injector and the ejector. *Professor* KENERSON *and Mr.* HALL.

Three hours. Through the year. Elective for students who have credit for Physics 1, 2, 3. *Tu., Wed., Sat., at 9.20.*

19, 20, 21. *Engineering Practice*

Applications of the principles of thermodynamics and mechanics to the production, transmission, utilization, and measurement of power; valves and valve gears, and valve setting; indicator practice and tests of various forms of steam engines, gas engines, etc.; standardization of auxiliary apparatus used in making the various tests; boiler testing; flue gas and fuel analysis, etc. Lectures, recitations, and laboratory work. *Professor* KENERSON *and Mr.* HALL.

Three hours. Through the year. Elective for students who have credit for or are taking 16, 17, 18. *Tu., 2.20 to 4.20.* First and second terms, *Wed., Fri., Sat., at 11.20.* Third term, *Tu., Wed., Sat., at 8.*

22. *Materials of Engineering*

Study of the sources, manufacture, and properties of the important materials used in engineering; laboratory tests to determine the behavior of materials when subjected to tensile, compressive, and torsional stresses; mixing and testing of cements and mortars; preparation and examination of sections for the microscopical study of the structure of metals and alloys. Lectures, recitations, and laboratory work. *Professor* KENERSON *and Mr.* HALL.

Three hours. Four hours of attendance. First and second terms. Elective for students who have credit for Mechanics 3. *Wed., Fri., at 10.20. 1st div. Mon., 2.20 to 4.20; 2d div. Tu., 2.20 to 4.20; 3d div. Th., 2.20 to 4.20; 4th div. Mon., 9.20 to 11.20.* Other laboratory periods of two consecutive hours may be arranged with the instructor.

23. *Power Plant Engineering*

Discussion of the relation and coördination of the various parts of the complete power plant; management, and methods of determining efficiency; selection of the best equipment from manufacturers'

catalogues and actual inspection. Lectures, recitations, tests, and tours of inspection. *Professor* PHETTEPLACE.

Three hours. First term. Elective for students who have credit for 19, 20, 21. *Wed., Fri., 2.20 to 5.20; Wed., Sat., at 9.20.*

24. *Advanced Laboratory Course*

Investigation of special problems in hydraulic and steam engineering. Determination of experimental constants for the Venturi meter, flow of water over weirs and through pipes, flow of air, steam, etc. Particular emphasis laid on preparation and form of reports. *Professor* KENERSON *and Mr.* HALL.

Three hours. Second term. *Wed., Fri., 2 to 5.*

25. *Thesis*

A thesis is required of all candidates for the degree of Bachelor of Science in Mechanical Engineering. The thesis must embody a design or a review of an engineering plant, appliance, process, or structure, or the results of an experimental investigation.

XVIII. MECHANICS AND MECHANICAL DRAWING

OTIS EVERETT RANDALL, PH.D., *Professor of Mechanics and Mechanical Drawing*

ANSEL BROOKS, PH.B., M.E., *Associate Professor of Mechanics and Mechanical Drawing*

JOHN JOSEPH LONG, PH.B., *Instructor in Mechanical Drawing*

MECHANICS

1. *Mechanics of Solids*

Statics, including resolution and composition of forces, determination of center of gravity, and problems relative to rigid bodies and flexible cords; dynamics, including rectilinear and curvilinear motion, virtual velocity, moment of inertia, work, energy and power, and friction; strength of materials, including tension, compression, shearing, torsion, flexure, and arches; methods of graphical solution of problems. *Professors* RANDALL *and* BROOKS.

Three hours. Through the year. Elective for students who have credit for Mathematics 4 and 5, and who have credit for or are taking Mathematics 6. First and second terms required of all candidates for the degree of Bachelor of Science. *Mon., Tu., Th., at 11.20.*

3. *Strength of Materials*

Tension, compression, shearing, torsion, flexure, arches, and graphical solution of problems. *Professors* RANDALL *and* BROOKS.

Six hours. Third term. Required of all candidates for the degree of Bachelor of Science. *Mon., Tu., Wed., Th., Fri., Sat., at 11.20.*

2. *Mechanics of Fluids*

Hydrostatics; nature and use of instruments; flow through orifices, over weirs, through tubes, through pipes, in conduits, flow of rivers, water supply and water power, dynamic pressure of water, water wheels, turbines, pumps and pumping. *Professors* RANDALL *and* BROOKS.

Three hours. First and second terms. Required of all candidates for the degree of Bachelor of Science. Elective for students who have credit for 3. *Wed., Fri., Sat., at 11.20.*

4. *Advanced Mechanics*

Comprehensive treatment of the principles of kinematics, statics, and kinetics; strength of materials; higher theoretical and practical problems. *Professor* RANDALL.

Three hours. Through the year. Elective for Seniors and Graduates who have credit for 3.

MECHANICAL DRAWING

6. *Elementary Mechanical Drawing*

Nature, care, and use of drafting instruments; lettering; plane problem construction; curve tracing; elementary projection. *Professor* BROOKS *and Mr.* LONG.

Two hours. Four hours of drawing. Through the year. Required in the Freshman year of candidates for the degree of Bachelor of Science. *Tu., Fri., 2.20 to 4.20; Wed., 2 to 6.*

1. *Descriptive Geometry*

Discussion, proof, and graphic solution of problems relating to the point, line, and plane, line and surface generation and classification, surface tangency, intersections and developments; application of the principles of descriptive geometry in isometric drawing, shades and shadows and perspective, machine drawing, and practical engineering problems. *Professors* RANDALL *and* BROOKS, *Mr.* LONG.

Three hours. Two hours of recitation and three hours of drawing. Through the

year. Required in the Sophomore year of candidates for the degree of Bachelor of Science. Elective for students who have credit for 2 or 6. *Mon., Tu., Wed., Th., Fri., Sat., at 9.20; Tu., Fri., Sat., at 10.20.*

2. *Elementary Mechanical Drawing*

Nature, care, and use of drafting instruments; plane problem construction; theory of orthographic and isometric projection. *Professor* Brooks *and Mr.* Long.

Three hours. Six hours of drawing. First term. Elective for Undergraduates. *Mon., Wed., Th., at 10.20.*

3. *Descriptive Geometry*

Discussion, proof, and graphic solution of problems in descriptive geometry. *Professor* Brooks *and Mr.* Long.

Three hours. Two hours of recitation and two hours of drawing. Second and third terms. Elective for Freshmen who are candidates for the degree of Bachelor of Philosophy, and for Sophomores, Juniors, and Seniors who have credit for 2. *Mon., Wed., Th., at 10.20.*

4, 5. *Machine Drawing*

Study and representation of machine parts; the principles of elementary machine design; sketches, detail and assembly drawings of machines; practice in reading drawings. *Professor* Brooks *and Mr.* Long.

Three hours. One hour of recitation and eight hours of drawing. First and second terms. Required of candidates for the degree of Bachelor of Science in Mechanical Engineering or Electrical Engineering. Elective for students who have credit for 3. *Tu. at 12.20; Mon., Th., 2.20 to 5.20.*

8. *Practical Mechanical Drawing*

Intersections and developments; third quadrant projection; sketching and dimensioning; conventional methods of representing machine parts; detailing and assembling; exercises in reading drawings; architectural drawing, including the drawing of plans and elevations and the details of building construction. For students desiring to continue their course in drawing without taking the theoretical work of descriptive geometry. *Professor* Brooks *and Mr.* Long.

Three hours. Six hours of drawing. Second and third terms. Elective for students who have credit for 2. *Mon., Wed., Th., at 10.20.*

XIX. PHILOSOPHY

WILLIAM HERBERT PERRY FAUNCE, A.M., D.D., LL.D., *Professor of Moral and Intellectual Philosophy*

EDMUND BURKE DELABARRE, PH.D., *Professor of Psychology*

WALTER GOODNOW EVERETT, PH.D., *Professor of Philosophy and Natural Theology*

ALEXANDER MEIKLEJOHN, PH.D., *Professor of Logic and Metaphysics*

ARTHUR UPHAM POPE, A.M., *Instructor in Philosophy*

1. *Logic*

Aims, methods, and limitations of human thinking; a preparation for work in the sciences and in philosophy. First term, general introduction and formal logic. Second term, principles and methods of the natural sciences. Third term, relations of science to philosophy; philosophical interpretation and criticism of the results of science. *Professor* MEIKLEJOHN *and Mr.* POPE.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. *Mon., Th., Fri., at 9.20.*

2. *Psychology, Introductory Course*

The main facts and laws of mental life, with particular attention to their arrangement in a scientific system. The course aims to provide a sound foundation for further acquaintance with this and allied subjects, for an improved judgment in dealing with many practical problems of life, and for beginning the study of philosophy. *Professor* DELABARRE.

Three hours. Through the year. Elective for Juniors and Seniors. *Wed., Fri., Sat., at 11.20.*

3. *Psychology, Advanced Course*

A seminary for the discussion of important and interesting questions in psychology. The course may be extended over several years if desired. In the first year are usually studied the problems of mental composition, of the relation of mind and body, and of the criteria for accepting evidence for the more unusual or apparently marvelous phenomena to which the name psychical research is ordinarily applied. Special problems for study are arranged with individual students who desire to pursue the subject for a longer period, or who have had more than one year of previous preparation. *Professor* DELABARRE.

Three hours. Through the year. Elective for Undergraduates and Graduates who have taken 2, or its equivalent.

4. *Experimental Psychology, Introductory Laboratory Course*
Description of the main lines and results of experimental research; demonstrations by the instructor or the class; training in the use of apparatus and in careful scientific observation and measurement. *Professor* DELABARRE.

Three hours. Six hours of attendance. Through the year. Elective for Juniors, Seniors, and Graduates, who have credit for or are taking 2. Although essentially a year course, it may, by special arrangement with the instructor, be taken for a shorter period.

5. *Experimental Psychology, Advanced Laboratory Course*
The aim is to study further the problems of experimental psychology, and, whenever possible, to make original contributions to scientific knowledge. The problems investigated vary and the course may be taken two or more years in succession. *Professor* DELABARRE.

One to six hours. Two to twelve hours of attendance. Through the year. Elective for students who have credit for 4. May be taken for more than six hours by Graduates.

6, 7, 8. *History of Philosophy*
The successive philosophical systems in their dialectical development and mutual relations; treatment not merely analytic and historical, but synthetic and constructive as well. First term, Greek philosophy. Second term, medieval and early modern philosophy. Third term, recent and contemporary philosophy. *Professor* EVERETT.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Mon., Th., Fri., at 9.20.*

9, 10. *Theoretical Ethics*
Intended to aid in mastering the fundamental problems of life and character. First term, a discussion of the nature and relations of ethics and an outline of the history of the chief ethical systems. Second term, a critical study of the fundamental concepts of ethics with the aim of constructing a tenable theory of conduct. *Professor* EVERETT.

Three hours. First and second terms. Elective for Juniors, Seniors, and Graduates. *Tu., Wed., Sat., at 9.20.*

12. *Philosophy of Religion*

A study of the nature of the religious consciousness and of the ultimate problems of religious belief. *Professor* EVERETT.

Three hours. Third term. Elective for Seniors and Graduates who have credit for one course in Philosophy. *Tu., Wed., Sat., at 9.20.*

13, 14, 15. *Philosophical Seminary*

Lectures, written reports, and discussions on the more difficult problems of philosophy. Subject for 1910–11: Studies in Contemporary Philosophy. *Professor* EVERETT.

Three hours. Through the year. Elective for Graduates.

[16. *Kantian and Post-Kantian Philosophy*]

Kant's *Critique of Pure Reason* studied as a source of modern philosophical theories. *Professor* MEIKLEJOHN.

Three hours. Through the year. Elective for Seniors who have credit for 6, 7, 8, and for Graduates. Not offered in 1910–11.

17. *Metaphysics*

A seminary for the discussion of special problems in metaphysical theory. Reading, written reports, and discussions. *Professor* MEIKLEJOHN.

Three hours. Through the year. Elective for Seniors who have credit for 6, 7, 8, and for Graduates.

XX. PHYSICS

CARL BARUS, PH.D., LL.D., *Hazard Professor of Physics*
ALBERT DEFOREST PALMER, PH.D., *Associate Professor of Physics*
ARTHUR EUGENE WATSON, PH.D., *Assistant Professor of Physics*
ROBERT FRANKLIN FIELD, A.M., *Instructor in Physics*
LOUIS JOHN GILLESPIE, PH.B., *Assistant in Physics*

1, 2, 3. *Elementary Physics*‡§

First term, kinematics and dynamics. Second term, molecular physics. Third term, electricity. Lectures, illustrated by experiments and the lantern; weekly written exercises corrected in detail

‡ Graduates taking courses 1, 2, 3, 4, 5, 6, are held responsible for all the demonstrations of either Watson's or Daniel's *Principles of General Physics*, or for the full equivalent.
§ Students who intend to teach physics should elect courses 1, 2, 3; 4, 5, 6; 7.

by the instructors. Designed for those who have had little previous training in physics. *Professor* BARUS.

Three hours. Through the year. Elective for Undergraduates who have credit for Elementary Algebra and Plane Trigonometry. *Mon., Wed., Th., at 10.20.*

4, 5, 6. *Elementary Physics, continued*‡§

First term, optics. Second term, acoustics, polarization of light. Third term, heat. Methods as in 1, 2, 3. *Professor* BARUS.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors, who have credit for 1. *Tu., Fri., Sat., at 10.20.*

7. *Physical Measurements*§

Elementary theory and practice of physical manipulation. Reports of experiments and solution of problems. *Professor* PALMER *and Mr.* FIELD.

Three hours. Six hours in the laboratory. Through the year. Elective for students who have credit for 1, 2, 3, or 4, 5, 6.

8, 9, 10. *Mathematical Treatment of Dynamical Problems*‖

Lectures. First term, discussion of the general principles of dynamics and the development of the general equations of motion. Second and third terms, application of these principles to special problems in thermodynamics and hydrodynamics. *Professor* PALMER.

Three hours. Through the year. Elective for Seniors and Graduates who have credit for 7 and Mathematics 9.

11, 12, 13. *Mathematical Theory of Electricity and Magnetism*‖

Lectures. Includes a discussion of the more important problems of electrical science. *Professor* PALMER.

Three hours. Through the year. Elective for Graduates and Seniors who have credit for 7 and Mathematics 9.

14, 15, 16. *Advanced Laboratory Course*

Special problems and reference to original sources for methods of solution. *Professors* BARUS, PALMER, *and* WATSON.

Three or six hours. Six or twelve hours of attendance. Through the year. Elective for students who have credit for 7.

‡ Graduates taking courses 1, 2, 3, 4, 5, 6, are held responsible for all the demonstrations of either Watson's or Daniel's *Principles of General Physics*, or for the full equivalent.

§ Students who intend to teach physics should elect courses 1, 2, 3 ; 4, 5, 6 ; 7.

‖ In determining which of the two courses 8, 9, 10, and 11, 12, 13, shall be offered in any given year, the preference of applicants will be considered.

17, 18, 19. *Applied Harmonic Analysis and Applied Vector Analysis*‡
Importance of Fourier's method shown by examples drawn from the analytical theory of heat, from elastics, alternating electricity, and elsewhere; treatment by the aid of spherical harmonics, Bessel functions, and Lamé functions; the chief theorems of vector analysis deduced and applied to dynamics, elastics, hydrodynamics, the electromagnetics of Maxwell and Hertz, and the electronic theory of Heaviside, Lorentz, and others. *Professor* BARUS.

Three hours. Through the year. Elective for Seniors and Graduates who have credit for 1, 2, 3 and Mathematics 6, 7, 8.

20, 21, 22. *Physics, Advanced Course*‡
Lectures on dynamics, potential, elastics, hydrostatics, hydrodynamics, viscosity, capillarity, electrostatics, magnetism, electro-magnetism, thermo-electrics, induction, Fresnel's optics, the electromagnetic theory of light, thermal analytics, and thermodynamics. Completed in two years. *Professor* BARUS.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates, who have credit for Mathematics 6, 7, 8.

23. *Precision Measurements in Photometry, Electricity, and Magnetism*
Professor PALMER.

Three hours. Six hours in the laboratory. Through the year. Elective for students who have credit for 7 or 24 and Mathematics 6.

24. *Theory of Measurements*
Lectures and recitations on the theory and precision of measurements and on methods of taking, recording, and reducing observations; laboratory instruction in selected physical measurements. *Professor* PALMER *and Mr.* FIELD.

Three hours. Five hours of attendance. Through the year. Elective for students who have credit for 1, 2, 3, or 4, 5, 6, and Mathematics 6, or 21. *1st div. Mon., Tu., at 12.20; 2d div. Mon., Th., at 12.20.* Laboratory hours will be posted in 11 Wilson Hall on the first day of each term.

‡ In determining which of the two courses 17, 18, 19, and 20, 21, 22, shall be offered in any given year, the preference of applicants will be considered.

ELECTRICAL ENGINEERING‡

Professor WATSON *and Mr.* FIELD

1, 2, 3. *General Course*

Methods of generating and utilizing electric currents, theory and working of dynamo-electric machinery.

Three hours. Elective for students who have taken or are taking Physics 7 or 24 and Mathematics 5 or 20. Those taking the course through the year attend two hours of lecture or recitation and one period (two hours) in the laboratory per week. For those taking but two terms, the laboratory practice is confined to one period in the second term. *Mon., Th., Fri., at 9.20;* laboratory assignments to be arranged with the instructor.

4, 5, 6. *Alternating Currents*

Mathematical and graphical treatment.

Three hours. Two hours of recitation and two hours of laboratory work. Through the year. Elective for students who have credit for 3 and who have taken or are taking Mathematics 9. *Mon., Th., at 10.20;* one laboratory period.

7, 8, 9. *Industrial Electricity*

First term, telephone and telegraph engineering. Second term, history of electrical engineering. Third term, design and calculation of direct current machinery, including actual drawing of electrical machinery in connection with Mechanical Engineering 11.

Three hours. Through the year. To be taken with 1, 2, 3. Not elective. First term, *Tu., Wed., Sat., at 9.20.* Second and third terms, *Tu., Wed., Fri., at 9.20.*

11. *Alternating Current Machinery*

Design and calculation of generators, motors, transformers, etc.

Three hours. Second term. Must be taken with 12. Elective for students who have credit for 1, 2, 3. *Mon., Th., Fri., at 9.20.*

12. *Power and Lighting Stations*

Equipment and systems of distribution.

Three hours. Second term. Must be taken with 11. Elective for students who have credit for 1, 2, 3. *Tu., Fri., at 11.20,* and a third period for trips of inspection or special assignments of work.

‡ All the courses in this department are required of candidates for the degree of Bachelor of Science in Electrical Engineering. Courses 1, 2, 3 are required of candidates for the degree of Bachelor of Science in Mechanical Engineering. Courses 1 and 2 are required of candidates for the degree of Bachelor of Science in Civil Engineering.

13. *Specific Electrical Engineering Problems*

Reading and discussion. Seminary method.

Three hours. Third term. Not elective. *Tu., Wed., Fri., at 10.20.*

14. *Thesis*

A thesis is required of all candidates for the degree of Bachelor of Science in Electrical Engineering. The thesis must embody a design or a review of an engineering plant, appliance, process, or structure, or the results of an experimental investigation.

XXI. ROMAN LITERATURE AND HISTORY

Albert Granger Harkness, A.M., Litt.D., *Professor of Roman Literature and History*

John Francis Greene, A.M., *Assistant Professor of Roman Literature and History*

1. *Livy*

Designed to enable the student to acquire facility in reading Latin, and to instruct him in the use of the Latin texts as a means of gaining a knowledge of Roman history; grammatical study and literary criticism also receive attention. *Professors* Harkness *and* Greene.

Three hours. First term. Elective for students who presented elementary and advanced Latin for admission. *1st div. Wed., Fri., Sat., at 11.20; 2d div. Tu., Th., Sat., at 12.20.*

2. *Cicero's Letters*

Aims and methods as in 1. *Professors* Harkness *and* Greene.

Three hours. Second term. Elective for students who presented elementary and advanced Latin for admission. *1st div. Wed., Fri., Sat., at 11.20; 2d div. Tu., Th., Sat., at 12.20.*

3. *Tacitus' Germania and Agricola*

Aims and methods as in 1. *Professors* Harkness *and* Greene.

Three hours. Third term. Elective for students who presented elementary and advanced Latin for admission. *1st div. Wed., Fri., Sat., at 11.20; 2d div. Tu., Th., Sat., at 12.20.*

4. *Horace's Odes and Epodes*

Critical study of the poems, supplemented by rapid reading with a view to comprehending the spirit of the author; the literary side of

the study is made prominent. Lectures; literary topics assigned to the class for special study. *Professor* GREENE.

Three hours. First term. Elective for Sophomores. *Mon., Wed., Fri., at 12.20.*

5. *Catullus, Tibullus, and Propertius*

Aims and methods as in 4. *Professor* GREENE.

Three hours. Second term. Elective for Sophomores. *Mon., Wed., Fri., at 12.20.*

6. *Horace's Satires*

Aims and methods as in 4. *Professor* HARKNESS.

Three hours. Third term. Elective for Sophomores. *Mon., Wed., Fri., at 12.20.*

[7, 8, 9. *Latin Poetry*]

Aims to give a connected and comprehensive view of the history and development of Latin poetry. Forms with 10, 11, 12 a two-year consecutive course affording a general survey of Roman literature. Lectures on the lives and writings of the authors; reading of characteristic selections; special study by members of the class of assigned topics in literary history and criticism. First term, Plautus. Second term, Lucretius. Third term, Juvenal and Martial. *Professors* HARKNESS *and* GREENE.

Three hours. Through the year. Elective for Juniors and Seniors. Each term may be elected independently. Not offered in 1910–11.

10, 11, 12. *Latin Prose*

Aims to give a connected and comprehensive view of the history and development of Latin prose. Forms with 7, 8, 9 a two-year consecutive course affording a general survey of Roman literature. Lectures on the lives and writings of the authors, on the development of oratory, etc.; reading of characteristic selections; special study by members of the class of assigned topics in literary history and criticism. First term, specimens of early Latin, Cicero's *Brutus*, and Quintilian. Second term, Cicero. Third term, the *Annals* of Tacitus. *Professors* HARKNESS *and* GREENE.

Three hours. Through the year. Elective for Juniors and Seniors. Each term may be elected independently. *Tu., Fri., Sat., at 10.20.*

13, 14, 15. *Petronius, Pliny the Younger, Martial*

Professor HARKNESS.

One hour. Through the year. Elective for Juniors, Seniors, and Graduates. *Fri. at 2.20.*

[16, 17, 18. *Epigraphy*]

Professor HARKNESS.

Two hours. Through the year. Elective for Graduates and approved Undergraduates. Not offered in 1910–11.

22, 23, 24. *Latin Composition*

Professor GREENE.

One hour. Through the year. Elective for Sophomores, Juniors, and Seniors. *Mon. at 3.20.*

25, 26, 27. *Seminary in Latin*

Subject for 1910–11: Reading from the poetry of the Empire. Gudeman's *Latin Literature of the Empire,* vol. II. Questions in textual criticism and in the structure of Latin verse will be considered. *Professors* HARKNESS *and* GREENE.

Three hours. Two hours of attendance. Through the year. Elective for Graduates.

28, 29. *Roman Life*

The private and public life of the Romans. Intended to give a comprehensive view of the civilization of Rome. Study based on the monuments and literature. Lectures, supplemented by reading and reports. No knowledge of Latin required. A continuation of Greek 33, the three terms together constituting the course called the History of Greek and Roman Life and Institutions. *Professor* GREENE.

Three hours. Second and third terms. Elective for Freshmen and Sophomores. *Mon., Tu., Th., at 11.20.*

[30. *Roman Literature*]

A brief history of Roman literature. Some of the most important and characteristic works studied in English translations. No knowledge of Latin required. Follows Greek 34 and is continued in the third term by Indo-European Philology 1. *Professor* HARKNESS.

Three hours. Second term. Elective for Freshmen and Sophomores. Not offered in 1910–11.

[31, 32, 33. *History of the Roman Empire*]

First term, the Early Empire. Second term, the Age of the Antonines. Third term, the Age of Constantine. *Professor* GREENE.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. Each term may be elected independently. Not offered in 1910–11.

XXII. ROMANCE LANGUAGES AND LITERATURES

COURTNEY LANGDON, A.B., *Professor of the Romance Languages and Literatures*

ALBERT BUSHNELL JOHNSON, A.M., *Associate Professor of the Romance Languages*

CHARLES HERMAN HUNKINS, A.B., *Instructor in French*

GILBERT CHINARD, B. ès L., L. ès L., *Instructor in French*

1*a*. *Elementary Course*

Grammar, composition, dictation, conversation; translation of selections from modern authors into idiomatic English. *Messrs.* HUNKINS *and* CHINARD.

Three hours. Through the year. Required of all students who did not present French for admission. *1st div. Tu., Th., Sat., at 8; 2d div. Tu., Wed., Sat., at 9.20; 3d div. Mon., Tu., Th., at 2.20.*

1*b*. *Elementary Course. Second year*

Reading of easy modern French prose in the form of stories, plays, or historical or biographical sketches; review of grammar; composition and conversation based upon the texts read. *Mr.* CHINARD.

Three hours. Through the year. Elective for students who have credit for 1 *a*. *Mon., Th., Fri., at 9.20.*

2, 3, 4. *Intermediate Course*

Reading of modern and classical authors; review of grammar; composition and conversation based upon the texts read; dictation. *Messrs.* HUNKINS *and* CHINARD.

Three hours. Through the year. Required of all students who presented elementary French for admission. Elective for students who have credit for 1. *1st div. Wed., Fri., Sat., at 11.20; 2d div. Tu., Th., Fri., at 8; 3d div. Mon., Th., Fri., at 9.20.*

5, 6, 7. *French Language and Literature*

An introduction to classical and modern French literature; composition; conversation based on the texts read; dictation. *Professor* JOHNSON *and Mr.* HUNKINS.

Three hours. Through the year. Elective for students who presented advanced French for admission or who have credit for 2, 3, 4. *Mon., Tu., Th., at 11.20.*

[8, 9, 10. *French Literature from 1800 to 1850*]

Chateaubriand, Hugo, Lamartine, De Musset, De Vigny, Balzac, George Sand, and Gautier; abstracts, in French, of works read outside the class; sight reading a prominent feature. *Professor* JOHNSON.

Three hours. Through the year. Elective for students who have credit for 5, 6, 7. Not offered in 1910–11.

11, 12, 13. *French Literature since 1850*

Flaubert, Augier, the younger Dumas, the Goncourts, Daudet, Zola, Taine, Loti, and others; abstracts, in French, of works read outside the class; sight reading a prominent feature. *Professor* JOHNSON.

Three hours. Through the year. Elective for students who have credit for 5, 6, 7, or 8, 9, 10. *Mon., Th., Fri., at 9.20.*

[17, 18, 19. *Old French*]

The elements of Romance philology and an introduction to the literature of the Middle Ages in France.

Three hours. One session weekly. Through the year. Elective for approved Seniors and Graduates. Not offered in 1910–11.

20, 21, 22. *French Literature from 1600 to 1800*

The history of the classical school; its formation, its apogee, and its decline. Particular attention will be given to those writers who did not employ the dramatic form. Lectures in French. *Mr.* CHINARD.

Three hours. Through the year. Elective for students who have credit for 10 or 13 and for approved students who have credit for 5, 6, 7. *Mon., Tu., Th., at 11.20.*

23, 24, 25. *The French Drama*

The history of the French drama. The classical school from Corneille to Beaumarchais, and the romantic and realistic schools from Hugo to Rostand. Lectures in French. *Professor* LANGDON.

Three hours. Through the year. Elective for students who have credit for 7, 10, or 13. *Tu., Fri., Sat., at 10.20.*

26, 27, 28. *Modern Italian*

Grammar, composition, conversation, and rapid translation of modern authors. *Professor* LANGDON.

Three hours. Through the year. Elective for Juniors and Seniors, and for Sophomores not electing more than one other modern foreign language. *Mon., Th., Fri., at 9.20.*

[29, 30, 31. *Italian Literature from 1321 to 1800*]

Selections from Petrarch, Sacchetti, Tasso, Macchiavelli, and Goldoni, with a brief survey of the life and history of the times. *Professor* LANGDON.

Three hours. Through the year. Elective for students who have credit for 26, 27, 28. Not offered in 1910–11.

[32, 33, 34. *Classical Italian*]

Selections from Dante, Petrarch, Ariosto, and Tasso. *Professor* LANGDON.

Three hours. Through the year. Elective for students who have credit for 26, 27, 28. Not offered in 1910–11.

35, 36, 37. *Dante in English*

A study of the whole of the *Divina Commedia* in English, in the light of modern thought and in connection with other great world-poems. An introduction to a study of comparative literature by means of the best available translations. *Professor* LANGDON.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Mon., Tu., Th., at 11.20.*

38, 39, 40. *Modern Spanish*

Grammar, conversation, composition, writing from dictation, and rapid reading. *Professor* JOHNSON.

Three hours. Through the year. Elective for Juniors, and for Sophomores not electing more than one other modern foreign language. *Tu., Fri., Sat., at 10.20.*

41, 42, 43. *Spanish Language and Literature*

Selected works of classical and modern authors, composition, conversation. *Professor* JOHNSON.

Three hours. Through the year. Elective for students who have credit for 38, 39, 40. *Wed., Fri., Sat., at 11.20.*

XXIII. SOCIAL AND POLITICAL SCIENCE‡

James Quayle Dealey,† Ph.D., *Professor of Social and Political Science*

Lester Frank Ward, A.M., LL.D., *Professor of Sociology*

William Kirk, Ph.D., *Associate Professor of Social and Political Science*

George Grafton Wilson, Ph.D., *Lecturer in International Law.*

Frank Greene Bates, Ph.D., *Lecturer in Political Science.*

POLITICAL SCIENCE

1. *Political Science, Elementary*

Affords a general outline of the subject, and serves as an introduction to the more extended and special courses which follow. *Professor* Dealey.

Three hours. Second term. Sophomore, Junior, or Senior year. Required of candidates for the degree of Bachelor of Arts; elective for others. Preceded by Economics 1. *1st div. Tu., Fri., Sat., at 10.20; 2d div. Mon., Wed., Fri., at 12.20.*

2. *International Relations*

International law, diplomacy, and world-politics. *Dr.* Wilson.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Th., at 10.20.*

3, 4. *American Government*§

First term, constitution, organization, powers, and methods of the national system of government. Second term, organization and functions of the states and cities of the United States. First term, *Dr.* Bates. Second term, *Professor* Kirk.

Three hours. First and second terms. Followed by 5 in the third term. Elective for Juniors, Seniors, and Graduates. *Mon., Th., Fri., at 9.20.*

5. *Comparative Study of Constitutions*§

The constitutions of Germany, France, Great Britain, and Switzerland especially considered. *Professor* Kirk.

‡ The courses in this department other than 1 are open only to those students who have credit for Economics 1, Political Science 1, and Social Science 1, which together constitute an introduction to the advanced work of the departments of Social and Political Science and Economics.

† On leave of absence during the first term of the academic year 1910–11.

§ Courses 3, 4, 5, form a single course continuous through the year.

Three hours. Third term. Elective for Juniors, Seniors, and Graduates. *Mon., Th., Fri., at 9.20.*

13. *The State*‡

The origin, forms, development, functions, and institutions of the state. *Professor* KIRK.

Three hours. First term. Followed in the second term by 14. Elective for Juniors, Seniors, and Graduates. *Tu., Wed., Sat., at 9.20.*

14. *Development of Political Theory*‡

The growth of important political ideas traced from Plato to the present time, with emphasis on the evolution of democracy. *Professor* DEALEY.

Three hours. Second term. Followed in the third term by 8. Elective for Juniors, Seniors, and Graduates. *Tu., Wed., Sat., at 9.20.*

8. *Constitutional Law*‡

The principles and development of constitutional law, with special reference to the Constitution of the United States. *Professor* DEALEY.

Three hours. Third term. Preceded in the second term by 14. Elective for Juniors, Seniors, and Graduates. *Tu., Wed., Sat., at 9.20.*

6. *Roman Law*§

The influence of Roman law on ancient and modern political institutions.

Three hours. One term. Offered if applied for by Graduates.

7. *Jurisprudence*§

The fundamental principles of law and legal relations.

Three hours. One term. Offered if applied for by Graduates.

9. *The Latin-American Republics*§

The government and social conditions of the Latin-American Republics.

Three hours. One term. Offered if applied for by Graduates.

10. *Political Parties*§

The development of political parties in the United States and Europe.

Three hours. One term. Offered if applied for by Graduates.

‡ Courses 13, 14, 8, form a single course continuous through the year.

§ Courses 6, 7, 9-12, 15, are primarily for Graduates, and may be elected by those Undergraduates only who are approved by the department. These courses are given according to the needs of qualified applicants.

11. *Administration*‡

The principles and the chief national systems of administration.

Three hours. One term. Offered if applied for by Graduates.

12. *Administration (continued)*‡

Local and colonial administration.

Three hours. One term. Offered if applied for by Graduates.

15. *Current Political Theory and Practice*‡

A seminary course. Intended to train students in methods of estimating the value and significance of recent publications on political topics and the changes consequent upon current political development. *Dr.* Bates.

One hour. Through the year. Elective for Graduates. *Mon. at 5.*

20, 21, 22. *Investigation of Special Topics*

Intended to train the student in methods of gathering, handling, and presenting data in the study of political problems. In connection with this course, work in comparative legislation may be taken under the direction of the Legislative Reference Bureau of the State Library. Laboratory methods. *Professor* Kirk.

Three hours. Six hours of attendance. Through the year. Elective for Graduates and for approved Juniors and Seniors.

SOCIAL SCIENCE

1. *Social Science, Elementary*

Affords a general outline of the subject, and serves as an introduction to the more extended and special courses which follow. *Professor* Dealey.

Three hours. Third term. Sophomore, Junior, or Senior year. Must be preceded by Economics 1 and Political Science 1. Required of candidates for the degree of Bachelor of Arts; elective for others. *1st div. Tu., Fri., Sat., at 10.20; 2d div. Mon., Wed., Fri., at 12.20.*

2. *Social Institutions, Conditions, and Problems*

Historical development of domestic, religious, and political institutions; study of such social problems as charity, crime, intemperance, marriage and divorce, etc. *Professor* Kirk.

‡ Courses 6, 7, 9–12, 15, are primarily for Graduates, and may be elected by those Undergraduates only who are approved by the department. These courses are given according to the needs of qualified applicants.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Mon., Tu., Th., at 11.20.*

3. *Origin and Development of Society*‡

The formation of human institutions and their subsequent modifications. *Professor* WARD.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 12.20.*

4. *Social Philosophy*‡

The relation of sociology to other sciences, especially its psychic aspects, and the interpretation of social phenomena. *Professor* WARD.

Three hours. First and second terms. Followed in third term by Social Science 5. Elective for Seniors and Graduates. *Wed., Fri., Sat., at 11.20.*

5. *Application of Sociological Principles*‡

The utility of sociology as the basis of legislation and of the social art. The improvement of society through conscious effort. *Professor* WARD.

Three hours. Third term. Elective for Seniors and Graduates. *Wed., Fri., Sat., at 11.20.*

10. *Sociological Theories of the Nineteenth Century and their Significance* §

A review of modern sociological thought in Europe and America, and its influence on the life and institutions of society. *Professor* WARD.

Three hours. Through the year at 4.30. Days to be arranged with the class. Elective for Graduates. Alternates with 6.

7. *Current Social Theory and Practice* §

A seminary course. (*See* Political Science 15.) *Professor* DEALEY. [This year *Dr.* WILSON.]

One hour. Through the year. Elective for Graduates. *Mon. at 4.*

8. *Demography* §

Dispersion of races; social study of race characteristics; emigration, immigration, etc.

Three hours. One term. Offered if applied for by Graduates.

‡ Course 3 deals with the subject chiefly from the historical standpoint. Course 4 deals mainly with the principles and theory of sociology. Undergraduates should not elect both of these courses in the same year, and 3 should precede 4. Course 5 may properly follow either of these.

§ Courses 6–10 are primarily for Graduates, and may be elected by those Undergraduates only who are approved by the department. These courses are given according to the needs of qualified applicants.

9. *Development of Social Theory*‡

Traces important theories, ancient and modern, in regard to social conditions and development.

Three hours. One term. Offered if applied for by Graduates.

[6. *Sociological Aspects of Education*]‡

The social importance of intellectual development and of the diffusion of knowledge. *Professor* Ward.

Three hours. Through the year. Elective for Graduates. Alternates with 10. Not offered in 1910–11.

20, 21, 22. *Investigation of Special Topics*

Intended to train the student in methods of gathering, handling, and presenting data in the study of social problems. During the year 1910–11 a special investigation course on Municipal Conditions and Social Welfare, including a study of social statistics, will be given in connection with the Bureau of Social Research of Providence. Laboratory methods. Under the direction of *Professor* Kirk.

Three hours. Six hours of attendance. Through the year. Elective for Graduates and for a limited number of Juniors and Seniors approved by the department.

MUSIC

Hamilton Crawford Macdougall, Mus.D., *Lecturer in Music*

1, 2, 3. *The Evolution of Modern Music*

A general course in the history of modern music from Beethoven to Wagner, Richard Strauss, and Debussy. Lectures, illustrations on the pianoforte, required readings, not more than ten short papers (800 to 1200 words), and special work in discriminative listening. Designed to give power of appreciation and interpretation with the minimum of technical detail. *Dr.* Macdougall.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. No previous knowledge of music required. *Mon., Th., at 10.20*, and a third hour at the pleasure of the instructor.

‡ Courses 6–10 are primarily for Graduates, and may be elected by those Undergraduates only who are approved by the department. These courses are given according to the needs of qualified applicants.

PHYSICAL TRAINING

FREDERICK WILLIAM MARVEL, PH.B., *Professor of Physical Training*

From the close of the Thanksgiving recess to the end of the second term, all first and second year students are required to attend gymnasium exercises three times a week as follows:

FRESHMEN. *1st div. Tu., Fri., Sat., at 10.20; 2d div. Mon., Tu., Th., at 4.20.*

SOPHOMORES. *1st div. Mon., Wed., Th., at 10.20; 2d div. Tu., Th., Fri., at 3.20.*

A voluntary class for Juniors and Seniors will be held on *Mon., Tu., Th., Fri., at 5.10.* Classes in heavy gymnastics, under the direction of a special instructor, are held four afternoons a week. Classes in wrestling, under the direction of a special instructor, are held three afternoons a week. Instruction in swimming, under the direction of a special instructor, is given by appointment.

TABLE OF ELECTIVE COURSES, 1910–11‡

FIRST TERM

Art
1 So. Jr. Sr. Gr.
4 Jr. Sr. Gr.
9 Gr.
10 Fr. So. Jr. Sr.
11 So. Jr. Sr.
12 Jr. Sr. Gr.
13 Jr. Sr.

Astronomy
1 Jr. Sr.
4 Jr. Sr.
13 Gr. Sr.

Biblical Literature
1 Jr. Sr. Gr.
2 Sr. Gr.
3 Gr. Sr.
4 Gr.
5 Sr. Gr.
6 Sr. Gr.
10 Jr. Sr. Gr.
13 So. Jr. Sr. Gr.
21 So. Jr. Sr. Gr.
15 Gr. Sr. Jr.
16 Gr.

Biology
1 Fr. So. Jr. Sr.
2 So. Jr. Sr.
4 Jr. Sr. Gr.
7 So. Jr. Sr.
9 Jr. Sr.
10 Jr. Sr.
11 Gr.
12 Jr. Sr. Gr.
13 Gr.
14 Gr.
15 Gr.
19 Fr. So. Jr. Sr.

Biology
31 Gr.
32 Gr.

Botany
1 Fr. So. Jr. Sr.
3 So. Jr. Sr. Gr.
6 Gr. Sr. Jr.

Chemistry
1 Fr. So. Jr. Sr.
4 So. Jr. Sr.
7 Jr. Sr. Gr.
10 Jr. Sr. Gr.
15 Gr.
21 Gr.
24 Jr. Sr. Gr.
27 Jr. Sr. Gr.
30 Gr.
33 Gr. Sr.
36 Gr. Sr.
41 Gr.

Civil Engineering
4 So. Jr. Sr.
11 Jr. Sr.
16 Jr. Sr.
23 Sr.
25 Sr.
26 Sr.

Economics
1 So. Jr. Sr.
2 Jr. Sr.
4 Jr. Sr. Gr.
5 Sr. Gr.
6 Jr. Sr. Gr.
13 So. Jr. Sr.
14 Jr. Sr. Gr.
20 Jr. Sr. Gr.

Education
1 Jr. Sr. Gr.
4 Sr. Gr.
7 Gr.
10 Gr.
13 Gr. Sr.
16 Gr.

Electrical Engineering
1 Jr. Sr.
4 Sr.

English
2 So.
3 So. Jr. Sr.
4 Jr. Sr.
5 Jr. Sr.
7 So. Jr. Sr.
8 Jr. Sr.
9 Jr. Sr. Gr.
10 Jr. Sr. Gr.
11 So.
13 Jr. Sr. Gr.
15 Jr. Sr.
16 Jr. Sr. Gr.
17 Jr. Sr. Gr.
19 So. Jr. Sr.
20 So. Jr. Sr.
23 Gr. Sr.

French
2 Fr. So.
5 Fr. So. Jr. Sr.
11 So. Jr. Sr.
20 So. Jr. Sr.
23 So. Jr. Sr.

Geology
3 Fr. So. Jr. Sr.
1 So. Jr. Sr.
9 So. Jr. Sr. Gr.

‡ Fr., So., Jr., Sr., Gr., indicate that the courses after which these abbreviations stand are open to Freshmen, Sophomores, Juniors, Seniors, or Graduate students, respectively.

Geology
12 So. Jr. Sr.
13 Gr. Sr.
14 Gr. Sr.
German
3 So. Jr. Sr.
6 Fr. So. Jr. Sr.
7 Fr. So. Jr. Sr.
26 So. Jr. Sr.
32 So. Jr. Sr.
16 Gr.
37 So. Jr. Sr.
36 Sr. Gr.
Greek
A Fr. So. Jr. Sr.
3 Fr. So. Jr. Sr.
35 So.
11 Jr. Sr.
23 Gr. Sr.
33 Fr. So.
History
2 Jr. Sr. Gr.
4 Jr. Sr. Gr.
11 Jr. Sr. Gr.
14 Gr.
22 Gr. Sr.
27 Jr. Sr. Gr.
25 Gr.
Italian
26 So. Jr. Sr.
35 Jr. Sr. Gr.
Latin
1 Fr. So. Jr. Sr.
4 So. Jr. Sr.
10 Jr. Sr.
13 Jr. Sr. Gr.
22 So. Jr. Sr.
Latin
25 Gr.
Mathematics
4 So. Jr. Sr.
6 So. Jr. Sr.
9 Jr. Sr.
15 So. Jr. Sr.
23 Gr.
27 Gr. Sr.
28 Gr.
Mechanical Drawing
1 So. Jr. Sr.
2 Fr. So. Jr. Sr.
4 So. Jr. Sr.
Mechanical Engineering
1–6 So. Jr. Sr.
9 Jr. Sr.
12 Sr.
16 Jr. Sr.
19 Jr. Sr.
22 Sr.
23 Sr.
Mechanics
1 So. Jr. Sr.
2 Jr. Sr.
4 Sr. Gr.
Music
1 So. Jr. Sr.
Philosophy
1 So. Jr. Sr.
2 Jr. Sr.
3 Sr. Gr.
4 Jr. Sr. Gr.
5 Sr. Gr.
6 Jr. Sr. Gr.
9 Jr. Sr. Gr.
13 Gr.
Philosophy
17 Sr. Gr.
Physics
1 So. Jr. Sr.
4 So. Jr. Sr.
7 Jr. Sr.
8 Sr. Gr.
11 Gr. Sr.
14 Sr. Gr.
17 Sr. Gr.
20 Jr. Sr. Gr.
23 Sr. Gr.
24 Jr. Sr. Gr.
Political Science
2 Jr. Sr. Gr.
3 Jr. Sr. Gr.
13 Jr. Sr. Gr.
6 Gr.
7 Gr.
9 Gr.
10 Gr.
11 Gr.
12 Gr.
15 Gr.
20 Gr. Jr. Sr.
Social Science
2 Jr. Sr. Gr.
3 Jr. Sr. Gr.
4 Sr. Gr.
7 Gr.
8 Gr.
9 Gr.
10 Gr.
20 Gr. Sr. Jr.
Spanish
38 So. Jr.
41 Jr. Sr.

SECOND TERM

Art
2 So. Jr. Sr. Gr.
5 Jr. Sr. Gr.
7 Gr.
Art
10 Fr. So. Jr. Sr.
11 So. Jr. Sr.
12 Jr. Sr. Gr.
Art
13 Jr. Sr.
Astronomy
2 Jr. Sr.

Astronomy
5 Jr. Sr.
14 Gr. Sr.
Biblical Literature
1 Jr. Sr. Gr.
2 Sr. Gr.
3 Gr. Sr.
4 Gr.
5 Sr. Gr.
6 Sr. Gr.
11 Jr. Sr. Gr.
17 So. Jr. Sr. Gr.
22 So. Jr. Sr. Gr.
15 Gr. Sr. Jr.
16 Gr.
Biology
1 Fr. So. Jr. Sr.
2 So. Jr. Sr.
5 Jr. Sr. Gr.
7 So. Jr. Sr.
9 Jr. Sr.
10 Jr. Sr.
11 Gr.
12 Jr. Sr. Gr.
13 Gr.
14 Gr.
15 Gr.
30 Fr. So. Jr. Sr.
31 Gr.
32 Gr.
Botany
1 Fr. So. Jr. Sr.
4 So. Jr. Sr. Gr.
6 Gr. Sr. Jr.
Chemistry
2 Fr. So. Jr. Sr.
5 So. Jr. Sr.
8 Jr. Sr. Gr.
11 Jr. Sr. Gr.
16 Gr.
22 Gr.
25 Jr. Sr. Gr.
28 Jr. Sr. Gr.
Chemistry
31 Gr.
34 Gr. Sr.
37 Gr. Sr.
42 Gr.
Civil Engineering
5 So. Jr. Sr.
8 So. Jr. Sr.
9 So. Jr. Sr.
12 Jr. Sr.
14 Jr. Sr.
27 Sr.
29 Sr.
30 Sr.
31 Sr.
Economics
2 Jr. Sr.
4 Jr. Sr. Gr.
5 Sr. Gr.
7 Jr. Sr. Gr.
13 So. Jr. Sr.
14 Jr. Sr. Gr.
21 Jr. Sr. Gr.
Education
2 Jr. Sr. Gr.
5 Sr. Gr.
8 Gr.
11 Gr.
14 Gr. Sr.
17 Gr.
Electrical Engineering
2 Jr. Sr.
5 Sr.
11 Sr.
12 Sr.
English
2 So.
3 So. Jr. Sr.
4 Jr. Sr.
6 Jr. Sr.
7 So. Jr. Sr.
8 Jr. Sr.
9 Jr. Sr. Gr.
English
10 Jr. Sr. Gr.
11 So.
13 Jr. Sr. Gr.
15 Jr. Sr.
16 Jr. Sr. Gr.
17 Jr. Sr. Gr.
19 So. Jr. Sr.
20 So. Jr. Sr.
23 Gr. Sr.
French
3 Fr. So.
6 Fr. So. Jr. Sr.
12 So. Jr. Sr.
21 Jr. Sr.
24 So. Jr. Sr.
Geology
3 Fr. So. Jr. Sr.
1 So. Jr. Sr.
8 So. Jr. Sr. Gr.
12 So. Jr. Sr.
13 Gr. Sr.
14 Gr. Sr.
15 Jr. Sr.
German
4 So. Jr. Sr.
6 Fr. So. Jr. Sr.
7 Fr. So. Jr. Sr.
27 So. Jr. Sr.
32 So. Jr. Sr.
16 Gr.
38 So. Jr. Sr.
36 Sr. Gr.
Greek
B Fr. So. Jr. Sr.
1 Fr. So. Jr. Sr.
4 So.
12 Jr. Sr.
19 So. Jr. Sr.
21 So. Jr. Sr.
24 Gr. Sr.
History
3 Jr. Sr. Gr.

History
5 Jr. Sr. Gr.
12 Jr. Sr. Gr.
15 Gr.
23 Gr. Sr.
28 Jr. Sr. Gr.
25 Gr.
Italian
27 So. Jr. Sr.
36 Jr. Sr. Gr.
Latin
2 Fr. So. Jr. Sr.
5 So. Jr. Sr.
11 Jr. Sr.
14 Jr. Sr. Gr.
23 So. Jr. Sr.
26 Gr.
28 Fr. So.
Mathematics
4 So. Jr. Sr.
7 So. Jr. Sr.
10 Jr. Sr.
23 Gr.
27 Gr. Sr.
28 Gr.
Mechanical Drawing
1 So. Jr. Sr.
3 Fr. So. Jr. Sr.
5 So. Jr. Sr.
8 Fr. So. Jr. Sr.

Mechanical Engineering
1–6 So. Jr. Sr.
10 Jr. Sr.
13 Sr.
17 Jr. Sr.
20 Jr. Sr.
22 Sr.
24 Sr.
Mechanics
1 So. Jr. Sr.
2 Jr. Sr.
4 Sr. Gr.
Music
2 So. Jr. Sr.
Philosophy
1 So. Jr. Sr.
2 Jr. Sr.
3 Sr. Gr.
4 Jr. Sr. Gr.
5 Sr. Gr.
7 Jr. Sr. Gr.
10 Jr. Sr. Gr.
14 Gr.
17 Sr. Gr.
Physics
2 So. Jr. Sr.
5 So. Jr. Sr.
7 Jr. Sr.
9 Sr. Gr.
12 Gr. Sr.

Physics
15 Sr. Gr.
18 Sr. Gr.
21 Jr. Sr. Gr.
23 Sr. Gr.
24 Jr. Sr. Gr.
Political Science
1 So. Jr. Sr.
2 Jr. Sr. Gr.
4 Jr. Sr. Gr.
14 Jr. Sr. Gr.
6 Gr.
7 Gr.
9 Gr.
10 Gr.
11 Gr.
12 Gr.
15 Gr.
21 Gr. Jr. Sr.
Social Science
2 Jr. Sr. Gr.
3 Jr. Sr. Gr.
4 Sr. Gr.
7 Gr.
8 Gr.
9 Gr.
10 Gr.
21 Gr. Jr. Sr.
Spanish
39 So. Jr.
42 Jr. Sr.

THIRD TERM

Art
3 So. Jr. Sr. Gr.
6 Jr. Sr. Gr.
7 Gr.
10 Fr. So. Jr. Sr.
11 So. Jr. Sr.
12 Jr. Sr. Gr.
13 Jr. Sr.
Astronomy
3 Jr. Sr.
15 Gr. Sr.

Biblical Literature
1 Jr. Sr. Gr.
2 Sr. Gr.
3 Gr. Sr.
4 Gr.
5 Sr. Gr.
6 Sr. Gr.
12 Jr. Sr. Gr.
18 So. Jr. Sr. Gr.
23 So. Jr. Sr. Gr.
15 Gr. Sr. Jr.

Biblical Literature
16 Gr.
Biology
1 Fr. So. Jr. Sr.
2 So. Jr. Sr.
3 So. Jr. Sr.
8 So. Jr. Sr.
9 Jr. Sr.
10 Jr. Sr.
11 Gr.
12 Jr. Sr. Gr.

Biology
13 Gr.
14 Gr.
15 Gr.
17 Jr. Sr.
18 Fr. So. Jr. Sr.
31 Gr.
32 Gr.
33 So. Jr. Sr. Gr.

Botany
1 Fr. So. Jr. Sr.
4 So. Jr. Sr. Gr.
6 Gr. Sr. Jr.
7 Fr. So. Jr. Sr.

Chemistry
3 Fr. So. Jr. Sr.
6 So. Jr. Sr.
9 Jr. Sr. Gr.
12 Jr. Sr. Gr.
13 Sr. Gr.
14 Sr. Gr.
17 Gr.
23 Jr. Sr. Gr.
26 Jr. Sr. Gr.
29 Jr. Sr. Gr.
32 Gr.
35 Gr. Sr.
38 Gr. Sr.
43 Gr.

Civil Engineering
6 So. Jr. Sr.
10 So. Jr. Sr.
13 Jr. Sr.
15 Jr. Sr.
17 Sr.
18 Sr.
19 So. Jr. Sr.
24 Sr.
28 Sr.
34 Sr.
36 Sr.

Economics
2 Jr. Sr.

Economics
4 Jr. Sr. Gr.
5 Sr. Gr.
9 Jr. Sr. Gr.
13 So. Jr. Sr.
14 So. Jr. Sr. Gr.
22 Jr. Sr. Gr.

Education
3 Jr. Sr. Gr.
6 Sr. Gr.
9 Gr.
12 Gr.
15 Gr. Sr.
18 Gr.

Electrical Engineering
3 Jr. Sr.
6 Sr.

English
2 So.
3 So. Jr. Sr.
4 Jr. Sr.
6 Jr. Sr.
7 So. Jr. Sr.
8 Jr. Sr.
9 Jr. Sr. Gr.
10 Jr. Sr. Gr.
11 So.
13 Jr. Sr. Gr.
15 Jr. Sr.
16 Jr. Sr. Gr.
17 Jr. Sr. Gr.
19 So. Jr. Sr.
20 So. Jr. Sr.
23 Gr. Sr.

French
4 Fr. So.
7 Fr. So. Jr. Sr.
13 So. Jr. Sr.
22 So. Jr. Sr.
25 So. Jr. Sr.

Geology
3 Fr. So. Jr. Sr.
1 So. Jr. Sr.

Geology
11 So. Jr. Sr. Gr.
12 So. Jr. Sr.
13 Gr. Sr.
14 Gr. Sr.

German
5 So. Jr. Sr.
6 Fr. So. Jr. Sr.
7 Fr. So. Jr. Sr.
28 So. Jr. Sr.
32 So. Jr. Sr.
16 Gr.
39 So. Jr. Sr.
36 Sr. Gr.

Greek
C Fr. So. Jr. Sr.
2 Fr. So. Jr. Sr.
6 So.
15 Jr. Sr.
20 So. Jr. Sr.
22 So. Jr. Sr.
25 Gr. Sr.

History
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7 Jr. Sr. Gr.
13 Jr. Sr. Gr.
16 Gr.
24 Gr. Sr.
29 Jr. Sr. Gr.
25 Gr.

Italian
28 So. Jr. Sr.
37 Jr. Sr. Gr.

Latin
3 Fr. So. Jr. Sr.
6 So. Jr. Sr.
12 Jr. Sr.
15 Jr. Sr. Gr.
24 So. Jr. Sr.
27 Gr.
29 Fr. So.

Mathematics
5 So. Jr. Sr.

Mathematics
8 So. Jr. Sr.
11 Jr. Sr.
23 Gr.
27 Gr. Sr.
28 Gr.
Mechanical Drawing
1 So. Jr. Sr.
3 Fr. So. Jr. Sr.
8 Fr. So. Jr. Sr.
Mechanical Engineering
1–6 So. Jr. Sr.
8 So. Jr. Sr.
11 Jr. Sr.
14 Sr.
15 Sr.
18 Jr. Sr.
21 Jr. Sr.
Mechanics
1 So. Jr. Sr.
3 So. Jr. Sr.
4 Sr. Gr.
Music
3 So. Jr. Sr.
Philosophy
1 So. Jr. Sr.
2 Jr. Sr.
3 Sr. Gr.
4 Jr. Sr. Gr.
5 Sr. Gr.
8 Jr. Sr. Gr.
12 Sr. Gr.
15 Gr.
17 Sr. Gr.
Physics
3 So. Jr. Sr.
6 So. Jr. Sr.
7 Jr. Sr.
10 Sr. Gr.
13 Gr. Sr.
16 Sr. Gr.
19 Sr. Gr.
22 Jr. Sr. Gr.
23 Sr. Gr.
24 Jr. Sr. Gr.
Political Science
2 Jr. Sr. Gr.
5 Jr. Sr. Gr.
Political Science
8 Jr. Sr. Gr.
6 Gr.
7 Gr.
9 Gr.
10 Gr.
11 Gr.
12 Gr.
15 Gr.
22 Gr. Jr. Sr.
Social Science
1 So. Jr. Sr.
2 Jr. Sr. Gr.
3 Jr. Sr. Gr.
5 Sr. Gr.
7 Gr.
8 Gr.
9 Gr.
10 Gr.
22 Gr. Jr. Sr.
Spanish
40 So. Jr.
43 Jr. Sr.

LIBRARIES, LABORATORIES, AND MUSEUMS

LIBRARIES

THE libraries of the University contain over one hundred and ninety thousand volumes. They comprise the MAIN LIBRARY, which occupies the John Hay Library Building, just completed; the JOHN CARTER BROWN LIBRARY, also with its own building; and the DEPARTMENT LIBRARIES, in the various seminary rooms and laboratories.

THE UNIVERSITY LIBRARY

HARRY LYMAN KOOPMAN, A.M., LITT.D., *Librarian*

THE MAIN LIBRARY is constantly increased with reference to the different courses of study, while at the same time there is kept in view the development of a library of general culture. It includes three special libraries. The first is the Harris Collection of American Poetry, founded by Albert G. Greene, of the class of 1820, extended by C. Fiske Harris, and bequeathed to the University by the Hon. Henry B. Anthony, of the class of 1833, which numbers over eleven thousand volumes, and is perhaps the largest collection in the world devoted to the subject; a fund, given by Samuel C. Eastman, of the class of 1857, in memory of the founder of the collection, provides for its regular increase. The second is the Rider Collection of Rhode Island History, formed by Sidney S. Rider and presented to the University by Marsden J. Perry, a collection remarkable for the extent and rarity of its manuscript and printed material bearing on the history of the state. The third is the Wheaton Collection of International Law, given by William V. Kellen, of the class of 1872, in honor of Henry Wheaton, of the class of 1802. This collection, which already numbers fifteen hundred volumes, is being rapidly increased.

The reading room contains the most important reference books and the books reserved by the departments for class use, also the loan desk, where books are charged and returned, and the desk of the reference librarian, whose duty is to advise and assist students in their use of the library.

On the floor of the stack which opens off the reading room has been placed a special collection known as the STUDENTS' LIBRARY, which consists of some fifteen thousand volumes selected for the use of undergraduates; here also are kept the latest numbers of the standard periodicals, American and foreign. To this floor all students have free access. The other floors of the stack are open regularly to graduate students and to undergraduates by special permission. On the top floor of the building is a large exhibition room, open to

the public, in which are displayed books and paintings and other objects of artistic, bibliographic, or historic interest.

The library funds amount to eighty thousand dollars. Of this sum ten thousand dollars constitutes the Gammell Fund for the purchase of books relating to the history of the United States; ten thousand dollars, the Olney Fund for the purchase of plants and botanical books; ten thousand dollars, the Diman Memorial Fund for the purchase of books on medieval and modern history; and ten thousand dollars, the Banigan Fund for the purchase of books on medieval and church history. The remainder includes several smaller special funds and the Library Fund proper.

The following persons are entitled to the use of the library without expense,—the members of the Corporation and Faculty; other college officers; graduates residing in the State of Rhode Island; donors to the funds of the University to the amount of five hundred dollars, residing in the state of Rhode Island; graduate and undergraduate students; and any other persons to whom the Corporation or the Library Committee may from time to time grant the privilege.

The Library is open during term time from 9 a.m. to 11 p.m. on week days, and from 2 to 11 p.m. on Sundays; during vacations from 9 a.m. to 5 p.m. on week days.

THE JOHN CARTER BROWN LIBRARY

George Parker Winship, A.M., *Librarian*

The John Carter Brown Library, given to the University by the trustees under the provisions of the will of John Nicholas Brown, of the class of 1885, is a collection of more than twenty thousand volumes relating to the history of North and South America during the colonial period. The larger part of the books, many of which are of great rarity and value, were printed before the year 1800 and contain the earliest published accounts of events connected with the discovery, exploration, and colonization of the Western Hemisphere. This collection, well known for many years as the most valuable private library of Americana in existence, was begun by John Carter Brown, of the class of 1816, and after his death was greatly enlarged by his widow and by his sons, John Nicholas and Harold Brown. The library occupies a building erected for it at the southeastern corner of the middle campus. It is open week days from 9 a.m. to 5 p.m.; the books may be consulted by properly qualified students or investigators, upon application to the Librarian. In the main hall of the building are a number of cases in which are exhibited rare books, engravings, and manuscripts belonging to the collection.

DEPARTMENT LIBRARIES

The Germanic Department Library is contained in two rooms in Sayles Hall. The nucleus was purchased in Germany by the late Professor Alonzo Williams

in the name of the principal donor, the Hon. Hezekiah Conant. It has since been augmented through the yearly library appropriation granted by the University, and recently an important addition was made through the generosity of Mr. Samuel Morris Conant of Pawtucket and other friends of the department, including German citizens of Providence. The library comprises over seven thousand carefully selected volumes, including editions of all the important writers of German literature; a large collection of Germanic philology; the leading German literary and philological periodicals; many works upon German history, the history of German literature, and German law, art, paleography, and geography. It is especially rich in works of the Middle High German period, in Goethe and Schiller literature, and in literature of the nineteenth century. It possesses several hundred photographs, some after paintings by the old German masters, some of important examples of German architecture, both ecclesiastical and secular; some representing characteristic views of German cities and German landscape. There are, furthermore, many reproductions of paintings by modern German artists, lantern-slides and volumes of plates illustrating the subjects taught, engravings, bronzes, etc. The rooms are open from 9.20 a.m. to 12.30 p.m., and from 2 to 6 p.m.

The English Department Library is contained in the rooms of the department in the John Hay Library Building. It comprises about three thousand volumes, of which more than twenty-seven hundred were from the private library of the late Hammond Lamont, Professor of Rhetoric in Brown University from 1895 to 1900. These were presented to the University in his memory, by the classes of 1899 and 1900.

The Classical Department Library is contained in the room in Sayles Hall occupied by the Albert Harkness Classical Seminary, named in honor of its founder, the late Professor Albert Harkness. It consists of fifteen hundred volumes, purchased with funds contributed by friends of the University interested in classical studies, and contains the most important collections of Greek and Roman authors, besides commentaries, reference books, and similar aids. The seminary is made the center for advanced study and research in the classical languages and literatures. Though primarily intended for graduate students, the seminary is open to such undergraduates as are qualified to profit by its advantages. The room is open from 9.20 a.m. to 10 p.m.

The Romance Department Library is contained in Room No. 4, Sayles Hall. It consists of a collection of a thousand volumes for the use of advanced students in the Romance languages. The room is open Monday, Tuesday, and Wednesday, from 4 to 6.30 p.m., and from 7 to 9 p.m.; on Saturday from 11.30 a.m. to 1 p.m.

The Biblical Department Library is contained in room No. 3, Sayles Hall. It consists of a reference collection of one thousand volumes, including a valua-

ble collection of Semitic books presented by Mr. Jacob Shartenberg of Pawtucket. Through the gift of Mr. William Gammell important books for the use of advanced students have recently been added. A number of Semitic, Biblical, and general religious journals are kept on file. The room is open from 9.20 a.m. to 12 m., from 2 to 5 p.m., and from 7 to 9 p.m., except Wednesday and Saturday afternoons and Friday evenings.

The Biological Department Library is contained in Rhode Island Hall. It is a collection of about two thousand two hundred volumes and fifteen hundred pamphlets, to which additions are constantly made. More than fifty current periodicals bearing upon the work of the department are regularly received. The rooms are open from 9.20 a.m. to 4 p.m.

The Educational Department Library is contained in the seminary room of the department, in the Administration Building. The library contains over twelve hundred volumes, chiefly text-books of recent publication. The room is open to all students interested in education, and to teachers and friends of education in the city and state.

The Library of the Department of Economics is contained in the rooms of the department in Sayles Hall. It comprises about ten thousand volumes, to which additions are constantly made, and receives regularly about one hundred and twenty-five periodicals and papers bearing upon the work of the department. The rooms are open from 8 a.m. to 10 p.m.

The Botanical Department Library, located in the Marcy Hall, consists of some eight hundred bound volumes, several thousand pamphlets, and the more important current periodicals. These books have been selected from the large number in the main library as the ones most likely to be in demand by students working in the laboratory, and by visiting botanists working in the Herbarium. When not in use at the department, nor on reserve at the department or the main library, any of these books may be borrowed in the usual manner by applying at the University Library.

The Physical Department Library is contained in a room in Wilson Hall. It is provided with files of the *Fortschritte der Physik*, *Annalen der Physik*, *Philosophical Magazine*, *Journal de Physique*, *Radium*, *Beiblätter der Physik*, *Physical Review*, *Scientific Abstracts*, and other magazines, together with a rich collection of the standard works and monographs in all departments of Physics and Electrical Engineering, to which are added the collected works of great authors, physical tables, etc. The room is open daily.

The Mathematical Department Library is contained in a room adjoining its recitation rooms in Wilson Hall. There are four hundred and seventy-five bound volumes of mathematical journals and six hundred and sixty-eight volumes of other books. Special effort has been made to have the best

books in all branches of Mathematics. The library has complete sets of the following journals, and regularly receives the current numbers; *Acta Mathematica*, *American Journal of Mathematics*, *Annals of Mathematics*, *Bulletin of the American Mathematical Society*, *Bulletin des Sciences Mathématiques*, *Journal de Mathématiques pures et appliquées* (Liouville), *Journal für die reine und angewandte Mathematik* (Crelle), *Mathematical Questions and Solutions from the Educational Times*, *Mathematische Annalen*, *Transactions of the American Mathematical Society*. It is desired that the library shall be used freely by the students; applications should be made to the librarian, Professor H. P. Manning.

The Libraries of the Departments of Civil Engineering, Mechanical Engineering, Mechanics and Mechanical Drawing are grouped together on the third floor of the Engineering Building. They form an excellent working library of about two thousand three hundred volumes, including complete sets of many periodicals. All of the important engineering periodicals are regularly received.

The Geological Department Library is in Room L, Sayles Hall. It consists of more than two thousand volumes of general reference works, government and state reports, and periodicals dealing with various lines of geographical and geological study. The library is open from 8 a.m. to 10 p.m.

The Women's College Library and Reading Room occupy two rooms in Pembroke Hall. The library comprises about two thousand volumes of standard literature, chosen with special regard to the courses offered, thus forming for students of the Women's College a convenient and valuable adjunct to the University Library. An experienced librarian is in charge.

Other Department Libraries. There are several other special collections of books for seminary and advanced laboratory work. The most important of these belong to the departments of Astronomy, Chemistry, History, Philosophy, and Social and Political Science.

OTHER PROVIDENCE LIBRARIES

There are also at the service of the students of the University the seven collections of books named below. These comprise, with the University Library, half a million volumes, exclusive of pamphlets and manuscripts.

The Providence Public Library offers to all students of Brown University, upon the same conditions as to other residents of the city, the use of its carefully chosen collection, which comprises more than one hundred and forty-two thousand volumes. It is situated at the corner of Washington and Greene Streets. Its principal rooms are open regularly from 9 a.m. to 9 p.m.; on Sundays and Christmas from 2 to 9 p.m. Among its special departments may be mentioned the Harris Collection on Slavery and the Civil War; the Educa-

tional Study-room; the "Standard Library" of best literature; and the Reference Department. About seven hundred and fifty periodicals, serials, and annuals (of which about four hundred are the best known weeklies, monthlies, and quarterlies) are currently received. Within a few years a valuable Foreign Language Department has been established, comprising about twelve thousand volumes, and representing more than a dozen of the modern languages and literatures. The library staff is glad to be consulted with respect to books relating to any of the departments of University study, and to prepare lists of references in connection with any of the special topics under consideration.

The Library of the Providence Athenaeum is a collection of general literature numbering seventy-three thousand volumes. The reading room receives over two hundred papers and magazines, including New York, Boston, and Providence daily papers, and American, English, German, French, and Italian weeklies, magazines, and reviews. In bound sets of periodicals and in books on art this library is especially rich. Professors or teachers, non-residents of the city, may become annual subscribers on the payment of four dollars in advance, and any student of Brown University whose family does not reside in the city, or who may obtain the privilege from the Board of Directors, may become a subscriber for three months on the payment of one dollar. The annual subscription for residents is seven dollars and a half. The Athenaeum is open from 9 a.m. to 10 p.m. on week days.

The Library of the Rhode Island Historical Society is situated on Waterman Street, next to the old University Library Building. The library of the society comprises thirty thousand bound volumes and fifty thousand unbound volumes and pamphlets. Through the courtesy of the society the collection is made accessible, free of charge, to members of the University. It offers special facilities for thorough research not only in all subjects relating to the history of Rhode Island, but also in genealogy, biography, general American history, early American travel, and the drama. The library is open from 9 a.m. to 4 p.m. on week days.

The Annmary Brown Memorial, situated on Brown Street south of the University grounds, was founded by General Rush C. Hawkins, of New York, in memory of his wife, Annmary Brown, of Providence, a granddaughter of Nicholas Brown, after whom the University was named. The building contains a collection — one of the most complete in the world — of books from the first European presses. It contains also a notable collection of paintings by old masters and modern painters. The collection of books was made for the special purpose of showing the progress of printing with movable metal type through the first half century of its existence, from about 1450 to 1500. It includes one hundred and thirty books from the possible two hundred and thirty-eight first presses set up in the cities, villages, and monasteries in Europe before the year 1501, and is fairly representative of countries. Among the books

are many rare and interesting volumes. Incidentally there came into the collection many notable books adorned with woodcuts which show the earliest use of the woodcutter's art for book illustration.

The Library of the Rhode Island Medical Society is in the Providence Public Library Building, on Washington Street. It comprises twenty-two thousand volumes and numerous pamphlets upon medical science, including biology, physiology, physiological psychology, hygiene, and other subjects the study of which is pursued in the University. About two hundred medical periodicals are currently received. Arrangements are easily made whereby any student can without cost enjoy the privileges here offered. This collection is open daily from 9.30 a.m. to 5.30 p.m.

The State Law Library, a collection of thirty-five thousand volumes, may be consulted in the Providence County Court House, at the corner of Benefit and College Streets, between the hours of 9 a.m. and 5 p.m. on week days, excepting on Saturdays, when it closes at 3 p.m. It is accessible to all students, and for certain lines of University study is invaluable. University students are requested to introduce themselves at the desk on their first visit to this library.

The State Library, located in the State House, is accessible to the public from 9 a.m. to 5 p.m.; on Saturdays from 9 a.m. to 12 m. This library contains a large collection of official documents of the United States and of the several states, a complete collection of the United States Patent Office Specifications, and general works pertaining to history and political science. The Legislative Reference Bureau conducted by the State Library directs the work of students who are investigating topics in comparative legislation.

LABORATORIES

The Ladd Astronomical Observatory is equipped with a Saegmuller-Brashear equatorial of twelve inches aperture, which is supplied with a filar micrometer, a spectroscope, and other attachments; four transit instruments, two of which can be used as zenith telescopes; a chronograph; three astronomical clocks; several sextants and chronometers; recording meteorological apparatus; and various minor instruments. The equipment is available for illustrating the general courses in astronomy and for practical use in the applied courses.

The Observatory furnishes constant time-signals to the Fire Department of the City of Providence, and to the Rhode Island Electric Protective Company, which distributes them to its patrons. Routine observations for determining clock errors, and for pressure, temperature, humidity, and precipitation, are made throughout the year. Special observations are also made as opportunity offers.

The Physical Laboratory is in Wilson Hall, which was specially designed and constructed for the Department of Physics. Twelve laboratory rooms are available for experimental study. Brick piers support the instruments requiring great steadiness, and the magnetic rooms are as free as possible from the influence of iron and from other disturbances. Several rooms on the ground floor are devoted to electrical engineering. The Laboratory is supplied with apparatus both experimental and demonstrative, and frequent additions are made. The department has a large collection of historical and other photographs, lantern-slides, and cage models illustrating the propositions in pure and applied physics.

The Chemical Laboratories are in Rogers Hall, which was erected expressly for the Department of Chemistry. The inorganic laboratory is supplied with tables and lockers furnishing accommodations for about two hundred and fifty students working by detachments. The organic laboratory is fitted with tables for about fifty students. Each table has arrangements for gas, high-pressure water-supply, etc. The library of the department is here.

The Geological Laboratories are in the basement of Sayles Hall. They include laboratories of general geology, geography, and mineralogy, equipped with the requisite apparatus and with a detailed series of illustrative specimens. The region in which the University is situated offers in a small compass both simple and complex problems in field research in structural, paleontological, and stratigraphic geology. The library of the department contains full sets of government and state geological reports, together with general reference works and current periodicals.

The Biological Laboratories are in Rhode Island Hall. They include a laboratory for graduate students, a seminary room, laboratories for physiology, for bacteriology and histology, for neurology and embryology, and a large laboratory for elementary anatomy and comparative anatomy. The collection of zoölogical material and the anatomical and histological preparations of the Museum, the anatomical collection of the Rhode Island Medical Society, and material frequently contributed by the United States Fish Commission from the deep-sea dredging excursions, are always accessible to the students. Abundant living material is also readily available, since the laboratory is situated near the salt water and within a few miles of a floating laboratory on Narragansett Bay.

The Botanical Laboratories are in the basement of Maxcy Hall. The larger laboratory is used for the elementary courses, and the smaller for advanced work. They are equipped with the necessary simple and compound microscopes, paraffin baths, microtomes, freezing apparatus, incubator, sterilizer, etc., and a considerable amount of plant material preserved in liquids, as well as dried. The Herbarium, in an adjoining room, is accessible to advanced stu-

dents in forestry and medicinal and systematic botany. Many reference books and current magazines are kept in the department rooms, in addition to the principal collection in the University Library.

The Psychological Laboratory occupies rooms in Wilson Hall. It possesses apparatus for the study of sensations, the determination of discriminative sensibility, the measurement of the duration of mental processes, the detection of physiological accompaniments of changes in consciousness, the study of temperament, and research in other fields. This equipment is adapted for the illustration and demonstration of the main results of experimental work in psychology, and for carrying on original research.

The Mechanical Engineering Laboratories, library, and drafting room are situated in the Engineering Building. The laboratories are equipped with apparatus for the work of the courses in strength of materials, steam, gas, and hydraulic engineering, and metallography. They contain a 400,000-pound and a 50,000-pound Riehlé testing machine; a machine for testing full-sized timber and steel beams; a 50,000-inch-pound Olsen torsion testing machine; a machine for testing by repeated stresses; a Riehlé cement testing machine; a cross-compound condensing Corliss engine; various smaller engines, gas and gasoline engines, steam pumps, air compressors, injectors, and the necessary apparatus for testing them; a rotary fire pump, Venturi meters, weirs, and measuring tanks; apparatus for investigating the nature and structure of alloys; a photographic dark room; and the usual small apparatus necessary to the work of such laboratories.

The Mechanical Engineering Shops, situated in Rogers Hall, are equipped with hand and machine tools for purposes of instruction in wood-working and metal-working.

The Mechanical Drawing Rooms, accommodating two hundred and fifty students, are on the top floor of the Engineering Building. Connected with the main room is a library and reading room containing books relating to drawing and allied subjects. A collection of about two hundred and twenty-five models in wood and metal is extensively used in the courses. There is a dark room, with apparatus for preparing blue-prints. Students who find it necessary may obtain the free use of drafting instruments by applying to the instructor.

The Civil Engineering Drafting Rooms, library, instrument room, and offices are located on the second floor of the Engineering Building. The drafting rooms have desks for about one hundred students. The instrument room contains a complete equipment of transits, theodolites, wye-levels, dumpy levels, hand levels, plane tables, and other apparatus necessary for the field work in surveying and railroad engineering. For the work in structural engineering the department has a collection of over four hundred photographs, five hun-

dred large blue-prints of bridges, buildings, roof trusses, etc., and a complete set of steel structural shapes and iron beam-hangers. The department has also a collection of the various rocks used as road material, a Bausch and Lomb petrographic microscope, a set of the rail sections of the American Society of Civil Engineers, and models of railway appliances and harbor improvements.

MUSEUMS

The Museums of Zoölogy and Anthropology are in Rhode Island Hall, and are open to the public daily. They are primarily not mere exhibition rooms, but places for work. The zoölogical and anatomical collections of the University form the Jenks Zoölogical Museum. The Museum of Anthropology contains a collection of articles of dress and implements from foreign countries, and a valuable collection of stone implements of aboriginal American races, including those of Rhode Island.

The Herbarium is in the basement of Maxcy Hall. The general collection is estimated to contain upwards of seventy-five thousand specimens from all parts of the world, but mainly from America. The cryptogams occupy ten cases and the seed-plants thirty. All of these are mounted and systematically arranged according to Engler and Prantl's *Natürliche Pflanzenfamilien.* There are also several cases of unmounted specimens and duplicates. The genus *Carex* is particularly well represented, as it was the object of much special study by Colonel S. T. Olney, the founder of the Herbarium.

The Museum of Fine Arts occupies the first floor of Manning Hall. It contains plaster casts of unusual excellence, chiefly from works of classical sculpture, which are of great value in illustrating ancient history, biography, and art. It contains also the George W. Harris bequest of pictures by old masters of the Italian and North European schools, and of works in marble, china, glass, bronze, and silver.

The University possesses a large number of valuable portraits, which are hung in Sayles Memorial Hall. The collection receives frequent accessions. It now includes portraits of the University's principal benefactors, of many of its former officers, and of other distinguished persons, Americans and foreigners. The history of Rhode Island is especially well represented.

A series of fourteen oil paintings illustrating early American history, by Frank O. Small, presented to the Department of History by Samuel M. Conant, is hung in the Faculty Room in the Administration Building.

All the collections are open to the public.

EXTENSION COURSES

THE University offers during each year two series of extension courses, given at the University and open to all who desire to enter. Each course consists of ten lectures or other exercises, and, while not identical with the corresponding course offered to regular students, is equivalent in the general character and amount of the work required. Persons entering these courses may at their option attend merely as listeners, or may do the prescribed work and take the examination given at the end of the course.

On the completion of each course, certificates are issued to those who have done the work assigned and passed the examination. Each extension course of ten lectures or other exercises is regarded by the University as the equivalent of one-half of a regular three-hour course for one term, and is accepted by the University in fulfilment of the requirements for the degree of A.B., Ph.B., and A.M., subject to such regulations respecting entrance requirements and prescribed courses as govern regularly enrolled candidates for the respective degrees. Regularly enrolled undergraduates, however, are not given credit for extension courses. For the degree of A.M., credit for extension courses may not exceed in amount two-fifths of the requirement for the degree, and the candidate must be registered with the Dean of the Graduate Department. Those who wish a certificate or University credit should announce their intention at the time of registration; all such announcements must be made not later than the third lecture of the course.

Applications for admission to extension courses should be sent to Professor Walter Ballou Jacobs, Secretary of the Committee on Extension Courses, Administration Building, Brown University. The application should give the full name and the address of the applicant, the course or courses in which registration is desired, and, if the applicant is a teacher, the present educational position. On receipt of the fee, a card of admission is issued which must be shown at the first lecture in each course. Classes are not formed in any course for which fewer than twenty-five apply. The fee for each course is three dollars and a half, payable in advance. Students desiring a certificate or University credit pay an additional fee of one dollar and a half; this fee is due on registration and must be paid not later than the third lecture of the course. Checks should be made payable to Brown University. They should be sent with the application if possible; if not, payment may be made at the Registrar's office, Administration Building.

The courses offered during the first half of the year 1910–11 are:

American History. The United States during the Civil War. Professor MacDonald. (*History 29—E 1.*)

Biology. The Conservation of Life and Health. Professors Mead, Gorham, Walter, *and Dr.* Mitchell. (*Biology X—E 1.*)

Engineering. Heat and Heat Engines. Professor KENERSON. (*Mechanical Engineering X—E 1.*)

English. American Literature. Professor BRONSON. (*English 22—E 1.*) *The Early English Novel. Professor* HUNTINGTON. (*English 18—E 3.*)

German. Reading, Composition, Conversation. Professor VON KLENZE. (*German 6—E 1.*)

Music. The Evolution of Modern Music—Beethoven to Wagner. Dr. MACDOUGALL. (*Music 1—E 1.*)

Philosophy. Moral Values. Professor EVERETT. (*Philosophy 9—E 1.*)

ARRANGEMENTS WITH OTHER INSTITUTIONS

THE RHODE ISLAND SCHOOL OF DESIGN

THE Rhode Island School of Design, which was incorporated in 1877 and opened in Providence in 1878, is an institution of large and increasing importance for the education of artisans and artists in the principles and processes of art, and for the general advancement of education in art by the exhibition of works of art and art studies, and by lectures. Its school building and museum are near the University grounds, and its collections are open daily to the public. Through its exhibitions there is opened to students an important means of culture.

The Corporation and Faculty of Brown University have agreed with the authorities of the Rhode Island School of Design upon a plan of coöperation in accordance with which certain courses at this School are open to students of the University and are counted towards a University degree. A description of these courses and a statement of the conditions under which they may be elected will be found in the list of studies given under the Department of Art, on pages 89, 90. Students from the Rhode Island School of Design are admitted to any classes in Brown University for which they are found to be prepared, and the University gives certain special courses for the benefit of classes from the School of Design.

THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS

In 1902 a number of the friends of the University, in recognition of the sixtieth anniversary of the graduation of the late Professor Harkness, one of the founders of the American School of Classical Studies at Athens, united in contributing to the School the sum of $5555, to establish a fund to be known as "The Albert Harkness Fund for the Benefit of Brown University." By the establishment of this fund, the privilege of free tuition in the School for all adequately prepared graduates of the University is henceforth secured. Any who desire detailed information regarding the School may obtain it by applying to Professor Poland, a former Director and now a member of the Managing Committee, Professor Manatt, likewise a member of the Managing Committee, or Professor Allinson, who is Professor of the Greek Language and Literature at the School for 1910–11.

THE NEWTON THEOLOGICAL INSTITUTION

The Newton Theological Institution has entered into an agreement with Brown University whereby certain work done in the University, for which a

mark of C has been awarded, or upon which the student passes an examination satisfactory to the Faculty of the Newton Theological Institution, will be credited toward graduation in the Theological course as follows: Biblical Literature and History 1, 2 (132 hours); 13, 17, 18, 14, 19, 20 (112 hours); 7–12 (108 hours); English 7 (33 hours),— in all, 385 hours. The total number of prescribed hours in the Theological course at the Newton Theological Institution is 1485.

THE SCHOOL COMMITTEE OF THE CITY OF PROVIDENCE

The School Committee of the City of Providence, by special agreement, appoints a number of students as teachers in the Providence High Schools. Appointments are made from members of the Senior class who have pursued undergraduate courses in Education. These student-teachers are of two types. Those of the first type—of whom there are at least four, two of each sex—are occupied in the schools each day for somewhat more than half the usual school session. They receive a salary of four hundred dollars a year from the city. Those of the second type are allowed to teach and observe about five hours a week. They have considerably more freedom in the choice of subjects and of hours than those of the first type; they receive no remuneration from the city. An unusual opportunity is thus afforded students to gain at the same time a knowledge of the theory of education and experience in the art of teaching. In making appointments to places as teachers of the lowest grade in the Providence High Schools, preference is given to those who have successfully completed this course of training as student-teachers. In this respect student-teachers of the second type have the same status before the committee that makes appointments as those of the first type. The practice-teaching in the Providence High Schools is done under the following supervising teachers: Charles E. Dennis, Ph.D., Latin; Charles E. Tilley, A.M., Physics and Chemistry; Harriet P. Fuller, A.M., Latin; M. Catherine Mahy, A.M., English; J. Madison Gathany, A.M., History and Civics; Agnes F. Williams, A.M., French; Howard D. Day, A.M., Physics and Chemistry; Adelaide H. Arnold, Ph.B., English and History; Russell C. Lowell, A.M., Mathematics; Clarence H. Manchester, A.M., English; Edith H. Williston, A.M., German.

In a similar way a number of students are appointed to places in the Providence Grammar Schools. They receive a salary of three hundred dollars a year from the city. A limited number of Seniors and Graduates who are pursuing courses in Education are allowed to observe and teach in the Grammar Schools of the city in a way similar to that provided for student-teachers of the second type in the High Schools. The practice-teaching in the Providence Grammar Schools is done under the following supervising teachers: Nathan G. Kingsley, Mary Williams, Frances H. Fowler, and the Grammar Critics of the Providence Public Schools.

PROVISIONS FOR THE PERSONAL WELFARE OF THE STUDENTS

PHYSICAL TRAINING

FOR the physical training of the students excellent opportunities are offered by the Lyman Gymnasium. It is thoroughly equipped with baths, dressing rooms, bowling alleys, and all kinds of apparatus usually found in modern gymnasiums. Connected with the gymnasium is the Colgate Hoyt Swimming Pool, seventy-five feet in length by twenty-five feet in width, with a capacity of seventy-five thousand gallons. All the gymnasium work is under the supervision of the Professor of Physical Training, who makes a thorough examination and measurement of each student on entrance, and at other times by request. Special cases are referred to Dr. G. A. Matteson, the University Physician. Such exercises are prescribed as may be necessary to give health, strength, and symmetrical development. No student is allowed to attempt any feat which is likely to result in injury. From the close of the Thanksgiving recess to the end of the second term, all first and second year students are required to attend gymnasium exercises three times a week. For other members of the University voluntary classes are provided. The instructor gives five-minute talks on personal hygiene and exercise. The class work consists of setting-up exercises, developing exercises, calisthenics, the use of clubs, dumb-bells, wands, and single sticks, and general athletics. Instruction is also given in swimming, a special effort being made to teach all students to swim. In all the work, the aim is to develop health, strength, and vitality.

All branches of athletics are under the management of the Brown University Athletic Association, and are controlled by a board of undergraduates. The Faculty Committee on Student Organizations has general oversight of the deportment and scholarship of the members of the various teams. Lincoln Field adjoins the gymnasium, and is a convenient place of exercise for the class teams and the students in general. Andrews Field, which is a mile and a half from the University, offers the usual opportunities for all the University teams. The Marston Field House, the gift of Mr. Edgar L. Marston, is fitted with dressing rooms, lockers, baths, and other accommodations.

MEDICAL CARE

Any student suffering from illness is expected at once to visit or summon the University Physician, Dr. George A. Matteson. When called to see students, the duty of the University Physician is to make one call for diagnosis and prescription at the expense of the University. For continued attendance, students make their own arrangements with Dr. Matteson or some other physician.

The University owns two free beds in the Rhode Island Hospital, to the occupancy of which the President of the University has the right of appointment. The first of these, The Charles Smith Bradley Free Bed, was established in 1872 by the payment to the hospital of four thousand dollars by the late Judge Bradley, a member of the Board of Fellows, thereby endowing a free bed "under the control of the President of Brown University for the time being, for the benefit of any officer or student of that institution who may have occasion for it." The second, The George Ide Chace Free Bed, was established by the payment to the hospital of four thousand dollars by the late Professor George Ide Chace; this foundation gives to the President of the University "the right to nominate and send to said hospital a patient, being a proper subject for treatment in said hospital according to the rules of the institution, to occupy a bed in said hospital, and to receive the usual care, and medical, surgical, and other attendance, and medicines and board, free of charge."

RELIGIOUS SERVICES

A chapel service is held in Sayles Hall every week day at 9 a.m. The President usually conducts the exercises. Attendance is required of undergraduates.

During the winter a series of vesper services is held in Sayles Hall on Wednesday afternoons at five o'clock, open both to students and to the public.

In 1910 the preachers at the vesper services were as follows:

Rev. Charles F. Aked, *New York City.*
Rev. Wallace MacMullen, *New York City.*
Rev. Henry S. Coffin, *New York City.*
Rev. Charles H. Dodd, *Baltimore, Md.*
Rev. George E. Horr, *Newton Centre, Mass.*
Rev. Harry E. Fosdick, *Montclair, N. J.*
Professor Henry Van Dyke, *Princeton, N. J.*
Rev. Newell Dwight Hillis, *Brooklyn, N. Y.*
Rev. George Hodges, *Cambridge, Mass.*

BROWN UNIVERSITY CHRISTIAN ASSOCIATION

The purpose of this Association is to unite all men who cherish Christian ideals in the service of their fellow men. To this end it welcomes to membership all men who are connected with the University. During the first and second terms the Association conducts weekly meetings for the discussion of topics of religious, educational, and philanthropic interest. In the second term the speakers are the University vesper preachers. Small groups of students meet together weekly for Bible study, with undergraduate leaders trained by teachers of wider experience. Mission study classes are held during the third term. The Association provides student workers for several philanthropic institutions in the city of Providence. An information bureau is open to all the men

of the entering class during the first few weeks of the college year. The Association Employment Bureau (see page 192) seeks to obtain remunerative work for students who are largely dependent upon their own resources. The General Secretary, C. Edwin Silcox, gives his full time to the work of the Association. His office is Room K, Rockefeller Hall, and other rooms in the same building are designated for the various meetings.

THE BROWN UNION

The Brown Union is an organization whose chief aim is to encourage a vigorous and healthy social life in the University and to bring under one roof, with competent direction, the various religious, literary, and athletic associations of the students. It occupies Rockefeller Hall, which was built expressly for its use. Its membership is open to students, alumni, and Faculty, and includes almost all the undergraduates. The Board of Management consists of the President of the Union, who must be a member of the Senior class, and four members appointed by the Corporation. The building provides attractive offices for the Brown University Christian Association, the Athletic Association, the musical and dramatic clubs, the *Brunonian*, the *Daily Herald*, the College Bookstore, etc., rooms of various sizes for student meetings, and the usual conveniences of a social club, including large and handsomely furnished rooms for reading and lounging, an auditorium with well-equipped stage, a restaurant and lunch counter, billiard room and barber shop. Informal entertainments and talks by members of the Faculty or other friends of the University are arranged for at frequent intervals. The personal direction of the affairs of the Union is in the hands of the Secretary and Treasurer, Robert T. Burbank, '07.

STUDENT ADVISERS

As early as possible in the year the members of the Freshman class are divided into small groups, for each of which some member of the Faculty acts as special counselor. In making the assignments, the expressed preference of either student or adviser is followed whenever practicable. One meeting is usually definitely appointed; but the working of the system is entirely informal, and while it is desired that it shall lead to closer personal relations, it fulfils its chief aim if it permits each student to feel that in any emergency of his college life, great or small, he is free to claim the counsel of a mature and interested adviser.

DORMITORY ACCOMMODATIONS

IN the University dormitories there are in all one hundred and thirty-two single rooms and thirty-four suites. The rooms in Hope College, University Hall, and Slater Hall are rented unfurnished. Those in Maxcy Hall and

Caswell Hall contain all necessary furniture, occupants providing nothing except bedclothes and towels. A table showing the rent and location of the dormitory rooms is printed in the Appendix. The prices there given include rent, heat, and service for the college year. Lighting is not included; there are meters for each room, and the occupants are charged for the amount of light used each term.

Each student renting a room must sign a contract therefor in the form given below, on which surety may be demanded, binding him to pay or cause to be paid the rent of the room through the entire year. Where two students rent a room together, each must sign a contract for half the room expenses. This obligation is not impaired by the student's removal from the University, whatever the cause of such removal.

The following is a contract between Brown University, party of the first part, and the undersigned, party of the second part. I hereby engage room No. in ; the same not to be occupied by any other person without consent of the party of the first part; and I bind myself to pay or cause to be paid to the Registrar of Brown University the entire rent, including heat and service, amounting to $ for the college year beginning September, 191 .

It is a part of this agreement that I shall be held responsible for all damage or defacement of such room or its furniture, ordinary wear excepted; also that disuse of the room by me on account of illness, or in case registration is refused me owing to low standing or bad conduct, does not impair the obligation of this contract.

*Signed*_____

This day of 191 .

Not more than two students are allowed regularly to occupy a room or suite. No sub-letting of rooms will be allowed. When the University holds full contracts for a room, the tenant or tenants may admit to the use of the room in the daytime one or two students, but not more than two. The names of any such sub-tenants must be reported to the Registrar as soon as the arrangement for sub-tenancy is made. For each sub-tenant the University makes an extra charge of one dollar a term for service. This sum is paid by the tenant-in-chief if there is but one; if there are two, each pays half.

All rooms not assigned for 1911–12 before May 10, 1911, will be disposed of at a drawing on May 26 at 4.30 p.m. Men intending to enter college in September can arrange to be represented at the drawing by notifying the Registrar.

UNIVERSITY FEES

FEES FOR UNDERGRADUATES. *Tuition:* $35 a term; $105 a year. *Incidentals:* $16 a term; $48 a year. *Matriculation fee* (Freshman year only): $5. *Graduation fee* (Senior year only): $8.

The incidental expenses are for the printing of programs, examination papers, and the like, the use of the library and the gymnasium, heat for these buildings and for the recitation rooms, and the wages of servants to care for them.

Special students who are taking courses amounting to less than fifteen hours a week pay in proportion to the actual amount taken.

FEES FOR RESIDENT GRADUATE STUDENTS. *Tuition:* $50 a term; $150 a year. *Graduation fee:* for the degree of Master of Arts, $15; for the degree of Master of Science, $15; for the degree of Doctor of Philosophy, $25.

Graduate students who are taking courses amounting to less than fifteen hours a week pay $10 a term for each three-hour course.

A candidate in residence for the degree of Master of Arts or Master of Science who has paid full tuition for one year may, if necessary to the attainment of his degree, continue his studies for one year more without additional charge.

A candidate in residence for the degree of Master of Arts, who without remitting his studies becomes a candidate for the degree of Doctor of Philosophy, is credited with whatever tuition he has already paid, in case his previous work is allowed to count toward the higher degree.

A candidate for the degree of Doctor of Philosophy who has paid full tuition for two years may, if necessary to the attainment of his degree, continue his studies for two years more without additional charge.

FEES FOR NON-RESIDENT GRADUATE STUDENTS. *Registration fee:* $25. *Tuition:* $10 a term; $30 a year. *Examination fee:* $15.

A non-resident candidate is entitled, upon payment of the registration and tuition fees, to take one three-hour course in residence. For each additional course taken in residence a fee of $10 a term is charged.

A non-resident candidate who has paid tuition for two years may, if necessary to the attainment of his degree, continue his studies for one year more without additional charge, except for work taken at the University.

LABORATORY FEES. In addition to the regular fees mentioned above the following fees are charged for laboratory courses. These fees cover the cost of ordinary supplies; special supplies and breakage are charged extra. *Chemistry*, 1, 2, 3, $3 *a term. Chemistry*, advanced 3-hour course, $5 *a term. Chemistry*, advanced 6-hour course, $10 *a term. Botany*, each 3-hour course, $3 *a term. Biology*, each 3-hour course, $3 *a term. Physics*, each 3-hour course,

$5 *a term. Mechanical Engineering*, each 3-hour course, $5 *a term. Electrical Engineering*, each 3-hour course, $5 *a term. Geology*, each 3-hour course, $3 *a term.*

SPECIAL FEES. Candidates for a first degree who do not pay four years full tuition fees must pay for all extra courses counted toward the degree at the rate of $5 per term for each three-hour course. This amount must be paid at the beginning of the term preceding the completion of the degree work. This rule does not apply to courses credited from other institutions or taken during the summer.

Candidates for the degree of A.M. or Sc.M. who do not pay full tuition fees for one year, and candidates for the degree of Ph.D. who do not pay full tuition fees for two years, must pay for all extra courses counted toward the degree at the rate of $5 per term for each three-hour course. This amount must be paid at the beginning of the term preceding the completion of the degree work. This rule does not apply to courses credited from other institutions.

PAYMENT OF TERM BILLS‡

Every student, graduate or undergraduate, must pay in advance, at registration for each term, all charges for tuition and incidentals for such term.

Students occupying dormitory rooms must also pay at the above time all room charges for the term.

Students taking laboratory courses must also pay at the above time all laboratory fees for the term. These fees vary from $3 to $5 for each three-hour laboratory course.

At the beginning of the third term all students occupying dormitory rooms or taking laboratory courses must, in addition to the payment of the above amounts, make a deposit of $5 toward charges for light or breakage during that term.

Freshmen, candidates for degrees, must pay at registration for the first term a matriculation fee of $5.

Candidates for graduation in any year must pay all graduation fees at the beginning of the third term of that year.

ESTIMATE OF ANNUAL EXPENSES

The following is an approximate estimate of the annual expenses of a student who occupies (with a room-mate) a dormitory room. It does not include the matriculation fee of five dollars in the first year, the graduation fee of eight dollars in the fourth year, nor outlay for clothes and traveling or other strictly personal expenses.

‡ After 1910-11 the year will be divided into two instead of three terms. One-half of all regular charges will be due at the beginning of each term.

	Moderate	*Liberal*
Tuition	$105.00	$105.00
Incidentals	48.00	48.00
Room rent, including heat and service	60.00	187.50
Board (40 weeks)	160.00	240.00
Books and laboratory expenses	30.70	75.00
Total	$403.00	$655.50

The Brown Union conducts a restaurant for its members in Rockefeller Hall; at present the price is $5 a week.

Students who need to earn money find in the city numerous opportunities for doing so by giving private instruction, by teaching in evening schools, and in various other ways.

FINANCIAL AID TO STUDENTS

THE aid which Brown University gives to students of limited means is granted under three conditions: (1) the recipient must be a candidate for a degree, having been fully admitted to the Freshman class or to advanced standing; (2) the recipient must be of good moral character and maintain a creditable standing in his studies; the aid is withdrawn if the student is placed under college discipline or fails to maintain good scholarship; an average of C is expected; (3) the recipient must be in need of the financial assistance desired. The aid rendered is of three kinds: (1) awards from fellowship, scholarship, and aid funds; (2) loans; (3) payment in cash or in credit on term bills for services rendered.

The administration of the scholarship and aid funds is in the hands of a committee of the Faculty, annually appointed by the Corporation for that purpose. The Dean of the University is the executive of the committee. Applications for scholarships for a given academic year should be filed with the Dean before May 1 of the preceding year. Action upon all applications is taken by the committee before July 1. The President has charge of the administration of fellowships, loan funds, and the service system.

[A] FELLOWSHIP, SCHOLARSHIP, AND AID FUNDS

THE GRAND ARMY OF THE REPUBLIC FELLOWSHIP. The income of a fund of ten thousand dollars given by the Grand Army of the Republic, Department of Rhode Island, is annually awarded to a graduate of Brown University, of acknowledged excellence in scholarship and character. The recipient must be enrolled as a candidate for the degree of Doctor of Philosophy or have obtained that degree, must reside at Brown University, and must devote himself exclusively to advanced liberal study. Holders of

the fellowship are appointed by the President of the University, subject to the approval of the Board of Fellows. Appointments to the fellowship are regularly made for one year, but incumbents of special diligence or ability may be reappointed. Descendants of Union Veterans of the Civil War are always to be preferred when the other qualifications of candidates are equal. The political or religious preferences of candidates cannot be taken into consideration. The President is authorized to make such other conditions, not inconsistent with the above, as he may from time to time deem wise and proper. Applications for this fellowship must be made in writing on blanks furnished by the Dean of the Graduate Department, and must be in the hands of the President not later than April 15. The Grand Army of the Republic Fellow for 1910–11 is

Albert Arnold Bennett

TEACHING FELLOWSHIPS. In addition to the foregoing a number of Teaching Fellowships have been established, information regarding which will be furnished by the President.

FUNDED SCHOLARSHIPS. There are now seventy-six scholarships of one thousand dollars, each with a designated name and yielding the beneficiary forty-five dollars annually; with the exceptions indicated below, they bear the names of their founders. The income is awarded annually according to the conditions attaching to each fund.

The Eleven Nicholas Brown Scholarships

The Four University Scholarships

The President's Scholarship, founded by President Sears.

The Six Alvah Woods Scholarships

The James H. Duncan Scholarship

The Isaac Davis Scholarship

The Arnold Whipple Scholarship, founded by Mrs. Arnold Whipple.

The Ephraim Wheaton Scholarship, founded by James Wheaton.

The Joseph Brown Scholarship, founded by Mrs. E. B. Rogers.

The Gardner Colby Scholarship

The Crocker Scholarship, founded by Robert H. Ives and Thomas P. Ives, Trustees.

The Clark Scholarship, also founded by the Messrs. Ives.

The George K. and H. A. Pevear Scholarship

The Joseph Charles Hartshorn Scholarship

The Rogers High School Scholarship, founded by William Sanford Rogers.

The James Wheaton Scholarship

The Charles Thurber Scholarship

The Pardon Miller Scholarship, founded by Mrs. Ann E. Miller.

The Hezekiah S. Chase Scholarship

The William Bucknell Scholarship

The Austin Merrick Scholarship, founded by Mrs. Olive E. Merrick.

The Horatio N. Slater Scholarship

The Earl P. Mason Scholarship

The Newport Scholarship, founded by William Sanford Rogers.

The Alexis Caswell Scholarship

The Three Henry Jackson Scholarships

The Mumford Scholarship, founded by Mrs. Louisa D. Mumford.

The Albert Day Scholarship

The Henry P. Kent Scholarship

The Romeo Elton Scholarship

The Five Annie E. Waters Scholarships

The Lewis Fairbrother Scholarship, founded by Mrs. Lewis Fairbrother.

The George Lawton Scholarship

The John P. Crozer Scholarship, founded by Mrs. Margaret Bucknell.

The James Y. Smith Scholarship

The Two S. S. Bradford Scholarships

The Francis R. Arnold Scholarship

The Cornelia E. Green Scholarship

The Henry Clifford Knight Scholarship, founded by Miss Amelia S. Knight, in memory of her brother, a member of the class of 1875.

The Thurston Scholarship, founded by the Honorable Benjamin F. Thurston, of the class of 1849.

The Rufus Babcock Scholarship, founded by Mrs. Caroline Vassar Babcock Jones, in memory of her father, the Rev. Rufus Babcock, of the class of 1821.

The James Fletcher Blackinton Scholarship, founded by Mrs. Mary D. Blackinton, in honor of her husband, James Fletcher Blackinton, of the class of 1847.

The Five William A. White Scholarships, founded by Mrs. Abby S. A. White, in honor of her husband, William A. White, of the class of 1857.

The Richards Scholarship, founded by the Rev. William Coolidge Richards, of the class of 1837.

The Samuel White Duncan Scholarship, founded by Mrs. Mary Duncan Harris.

The Benjamin Hutchinson Judah Scholarship

The S. Dryden Phelps Scholarship, founded by the Rev. S. Dryden Phelps, of the class of 1844, the income to be given each year to some student who is preparing for the Baptist ministry.

The Eliot Loomis Collins Scholarship, founded by Clarkson A. Collins in memory of his son, Eliot Loomis Collins, of the class of 1910, "the income to be given each year to some member of the Junior class needing pecuniary aid, who may possess his characteristic qualities of earnestness of application, steadfastness of character, and cheerful personality."

There are also the following scholarships of larger amounts:

The Two George J. Sherman Scholarships, paid from the income of a fund of two thousand five hundred and sixty-five dollars.

The Bartlett Scholarship of four thousand dollars, founded by Mrs. Elizabeth Slater Bartlett; the income to be "devoted to the support of one or more students needing pecuniary aid, and giving promise, by studious aim and by character and scholarship, of rising to distinction and usefulness."

The Glover Scholarship of five thousand dollars, founded by Henry R. Glover, "in memory of his father, Samuel Glover, of the class of 1808, and of his brother, Samuel Glover, Jr., of the class of 1839."

The Rebecca A. Wheeler Scholarship of fifteen hundred and seventy-one dollars; the income to assist some worthy student, preferably a candidate for the Baptist ministry.

The Scholarship of the Class of 1838 of thirty-eight hundred dollars.

The Joseph Charles Hartshorn Scholarship of two thousand dollars.

The Two Banigan Scholarships of three thousand dollars each, founded by Joseph Banigan, of Providence; the income as far as necessary to be used each year to defray the tuition of two students of the University.

The George Ide Chace Scholarship of five thousand dollars, founded by Professor George Ide Chace, the income to be assigned each year by the Faculty to some member of the Senior class needing the money, who shows "marked ability, exemplary industry, generous aspirations, and irreproachable character." If in the Senior class there chances to be no person fulfilling the requirements of this scholarship, the proceeds of the scholarship for that year must be appropriated to the purchase of books for the Library of the University.

The Abby Wheaton Chace Scholarship of four thousand dollars, also founded by Professor George Ide Chace, the income to be assigned yearly by the Faculty to some member of the Junior class needing the money, who shows "marked ability, exemplary industry, generous aspirations, and irreproachable character." If in the Junior class there chances to be no person fulfilling the requirements of this scholarship, the proceeds of the scholar-

ship for that year must be appropriated to the purchase of books for the Library of the University.

The John L. Lincoln Scholarship of twenty-five hundred dollars, founded by Abby G. Beckwith.

The Truman Beckwith Scholarship of twenty-five hundred dollars, founded by Abby G. Beckwith.

The Thayer Scholarship, founded by Edward C. Thayer, in honor of his father, Joseph Thayer, of the class of 1815, the income to be for the education of any young man or woman a resident of Uxbridge, Massachusetts, indorsed by the selectmen and superintendent of schools there, needing pecuniary aid, and giving promise by character and scholarship of a life of usefulness. If there is no applicant from Uxbridge, the income may go to any applicant from Massachusetts who fulfils the conditions.

The Two Walter G. Webster Scholarships, founded by the Rev. Walter G. Webster, of the class of 1878; the income to go each year to two young men, members of the Freshman class, holding the full diploma of the Classical High School of the City of Providence and duly matriculated for the degree of Bachelor of Arts; "the nomination to rest with the Principal of said school, and to be made on the basis of character and scholarship, due regard being had to the need of such assistance."

The S. W. Marston Scholarship, founded in the name of his father by Edgar L. Marston. This scholarship yields two hundred dollars a year, and is open to any graduate of William Jewell College who may be recommended by the President of that institution.

The Three E. L. Marston Scholarships, founded by Edgar L. Marston. Each of these scholarships yields two hundred dollars a year. The first scholarship is open to any graduate of La Grange College who may be recommended by the President of that institution. The second is open to any graduate of Baylor University under similar conditions. The third is open to any graduate of the Central High School in St. Louis, Missouri, subject to the recommendation of the Principal.

The Eaton Scholarship of two thousand dollars, founded in memory of her husband by Mrs. Caroline B. Eaton, the income to be used "in the aid of indigent Baptist young men having the ministry in view, preference being given to young men from New Hampshire."

The Alexander Farnum Scholarship of two thousand dollars, founded by Rev. Augustus Woodbury; the income to be given to such student as the Faculty shall select, the primary condition being that such student shall have been prepared for college at Phillips Exeter Academy in Exeter, New Hampshire.

The Albert Harkness Scholarship of three thousand dollars, founded by Professor Albert Harkness; the income to be paid annually under the direction of the Faculty to some student of excellent character and high scholarship who shall be in need of pecuniary aid.

A Friend's Scholarship of five thousand dollars, founded by a friend of the University, the income to be awarded annually to some student in need of aid.

The following scholarships have been in part established:

The Two George Hale Bacon Memorial Scholarships, paying each recipient one hundred and fifty dollars a year, founded by George A. Bacon in the name of his father. The awards are made only to young men in need of assistance and solely on grounds of scholarship and personal character, no other consideration to receive any weight whatever.

AID FUNDS. There are six aid funds at the disposal of the University. The income of these funds is divided into scholarships of varying amounts, which are awarded under the general conditions applicable to all scholarships. They are as follows:

The Aaron Lucius Ordway Memorial Fund of twenty-five hundred dollars, founded by Samuel H. Ordway in the name of his father, "the income to be used in the discretion of the President to assist regular students of the University who are in need of assistance. Each student who accepts such assistance shall in writing acknowledge the receipt of the same and pledge himself to repay the amount so received by him as soon as he can conveniently afford to do so, all sums so repaid to be added to the principal."

The Nancy Goodnow Fund of two thousand dollars, the income to be expended in assisting one or more students of the University who are preparing to be ministers of the Baptist denomination in the United States.

The Aid Fund, established by friends of the University in 1868 and now amounting to $9300.

The Daniel W. Lyman Fund for Students, established by Daniel W. Lyman and now amounting to $72,250.

The William Grosbeck Goddard Memorial Fund of $3500, founded by Col. Robert H. I. Goddard in the name of his son, "the income to be used by the President or acting President of the University, in his discretion, to aid young men without adequate means to obtain an education. Each beneficiary shall give a receipt for all money received, and shall agree, without making any written pledge, to refund amounts received by him whenever he can do so conveniently."

The Edwin A. W. Harlow Fund, founded by Edwin A. W. Harlow, now amounting to $10,400, the income to be "for assisting poor young men of excellent moral character in the Academic Department."

UNIVERSITY SCHOLARSHIPS. In addition to the income of the Scholarship and Aid Funds, the Advisory and Executive Committee of the Corporation appropriates each year a large sum of money from the Common Fund of the University for the assistance of students. The amount at present exceeds $15,000, and is used to provide University scholarships, which are of three grades:

(1) A small number yielding each $50 a term or $150 a year, awarded to a few Juniors and Seniors of especially high scholarship.

(2) A number yielding each $35 a term or $105 a year.

(3) A number yielding each $20 a term or $60 a year, used in part to supplement the smaller endowed scholarships, and also for those students needing relatively less assistance.

The University Scholarships are taken directly from the University treasury and employ funds which would otherwise be available for other college purposes. It is expected, therefore, that the holders of these scholarships will regard them as in a certain sense loans, and will at some time after graduation return to the treasury the amount awarded, to be used for the increase of the permanent scholarship funds, or that they will in some other way contribute to the endowment of the University.

[B] LOAN FUNDS

I. The Alumni Loan Fund, now amounting to about $4300, was established by the Alumni Association at the Commencement of 1900 by a vote transferring to the Treasurer of the University the fund formerly known as the Brown Loyalty Fund, to be used as a loan fund for students. The principal of this fund is loaned at interest, to be repaid as agreed upon in each instance.

II. There is another fund, of several hundred dollars, which is loaned in small amounts without interest, for short periods, to students unexpectedly needing temporary assistance.

[C] SERVICE

The University is able to give employment to a number of students as monitors, assistants in the libraries and laboratories, members of the choir, and clerks in the Registrar's office. Not more than two hours a day are ordinarily required of any student; the compensation is made at definite rates. At present about $6000 a year is appropriated for service, and employment is given to about eighty students, who receive amounts varying from $20 to $40 a term.

The University also coöperates with the Christian Association in securing employment for students by business houses and residents of the city. Students who desire any kind of work are requested to make application to the General Secretary of the Brown University Christian Association, Rockefeller Hall.

PREMIUMS, PRIZES, AND HONORS‡

FOR EXCELLENCE IN PREPARATORY STUDIES

The President's Premiums, derived from the income of a fund presented to the University in 1843 by President Wayland, supplemented from the income of the Hicks Prize Fund, No. 2, are awarded each year to those members of the Freshman class who upon examination are found to excel in the studies required for admission to the University in Greek and Latin. First and Second Premiums are awarded in each of these studies. The examinations deal with the general principles and laws of the languages involved rather than with irregularities and exceptions. Special importance is attached to the pupil's familiarity with the subject-matter of the works read, and to his ability to translate with accuracy and facility into clear, appropriate, and idiomatic English. The examination in Greek is held in 5 Maxcy Hall at 2.30 p.m. on the second Saturday of the first term, and that in Latin in 1 Sayles Hall at 2.30 p.m. on the third Wednesday. The award of these premiums in 1910 was as follows:

In Greek *the first premium to* Philip Jetter, *instructed in the Classical High School, Providence.*

The second premium to Alfred Ernest Raia, *instructed in the Classical High School, Providence.*

In Latin *the first premium to* Alfred Hugh Boudreau, *instructed in the Classical High School, Providence.*

The second premium to Philip Jetter, *instructed in the Classical High School, Providence.*

The Hartshorn Premiums in Mathematics, derived from the income of a fund of one thousand dollars presented to the University in 1872 by Joseph Charles Hartshorn, of the class of 1841, are awarded each year to the two members of the Freshman class who upon examination are found to excel in the mathematical studies required for admission. The examination is held in 27 Wilson Hall at 2 p.m. on the third Saturday of the first term. The award of these premiums in 1910 was as follows:

The first premium to Herbert Elliott Foote, *instructed in the High School, Pawtucket, Rhode Island.*

The second premium to Clarence Newton Reynolds, Jr., *instructed in the High School, Malden, Mass.*

‡ The premiums and prizes enumerated here are, with the exception of the *Society of Colonial Dames Prize in American History* (see page 197), intended for men. The students of the Women's College are entitled to compete in all examinations for premiums and prizes offered in Brown University. In case any woman is entitled to a first premium, one is awarded her by the Dean of the Women's College. For premiums awarded to women in 1910 see page 250.

The Entrance Premiums in French, derived from the income of the Hicks Prize Fund, No. 2, are awarded each year to the two members of the Freshman class who upon examination are found to excel in the French studies required for admission to the University. The examination is held in 1 Sayles Hall at 2 p.m. on the fourth Wednesday of the first term. The award of these premiums in 1910 was as follows:

The first premium to Alfred Hugh Boudreau, *instructed in the Classical High School, Providence.*

The second premium to George Linsley Cristy, *instructed in the Hope Street High School, Providence.*

The Entrance Premiums in German, derived from the income of the Hicks Prize Fund, No. 2, are awarded each year to the two members of the Freshman class who upon examination are found to excel in the German studies required for admission to the University. The examination is held in 5 Sayles Hall on the fourth Saturday of the first term. In 1910 these were the Caesar Misch Prizes, and were awarded as follows:

The first prize to Alfred Hugh Boudreau, *instructed in the Classical High School, Providence.*

The second prize to James Joseph McGovern, *instructed in the Hope Street High School, Providence.*

FOR EXCELLENCE IN UNIVERSITY STUDIES

The Carpenter Prizes for Elocution, derived from the income of a fund established in 1867 by Thomas Carpenter, are awarded each year to the three students to whom are assigned the first, the second, and the third rank of excellence in elocution. The competition is open to all members of the Sophomore class, and to those members of the Junior class who did not enter the preliminary competition in their Sophomore year. The selections declaimed may be either prose or verse. They must be approved by the Professor of Public Speaking, with whom competitors must enter their names not later than the first day of February. A preliminary contest for the purpose of selecting the speakers takes place in the latter part of the winter term; all arrangements for it are in the hands of the Professor of Public Speaking. The committee of award consists of five members,—the Professor of Public Speaking, who is the chairman, two persons selected by the Corporation, and two persons selected by the Sophomore class during the first term of the year; no one who is or has been a member of the class is eligible to membership in the committee. In 1911 the contest will be held in Manning Hall on May 2. In 1910 these prizes were awarded as follows:

The first prize to Arthur Franklin Newell
The second prize to Samson Nathanson
The third prize to Wendell Richardson Swint

The Hicks Prizes for Excellence in Debate, established by the Honorable Ratcliffe Hicks, of the class of 1864, are annually awarded as follows:

I. Two prizes of fifty dollars each, one in each of the two series of contests for the selection of the representatives of the University in the intercollegiate debates. In each instance the prize is given to the man showing the greatest ability both in the preliminary trials and in the final trial. In awarding the prize, regard is given to thought, style, and delivery. The judges are three, appointed by the Debating Union. In 1910 these prizes were awarded to

Clifton Henry Walcott *and* Morris Jacob Wessel

II. A first prize of thirty dollars and two second prizes of twenty dollars to the students showing the greatest ability in a public debate between the representatives of the Junior and Sophomore classes. Each class is represented by three men, whom a committee appointed by the President of the University chooses from the preliminary contestants at least a month before the public debate. This committee also determines the subject and makes the necessary arrangements. The judges in the public debate are three, one appointed by the President, and one by each group of competitors. The prizes are awarded irrespective of the decision upon the debate as a whole. Any one prize may be withheld if no one is adjudged to deserve it. In making the award, regard is given to thought, style, and delivery. In 1911 the public debate will be held on May 16. In 1910 these prizes were awarded as follows:

The first prize to Judah Semonoff
The second prizes to George Christian Stucker
and Preston Hart Hood

The Dunn Premium. The income of a fund of one thousand dollars, presented to the University in 1872 by pupils and friends of Professor Robinson Potter Dunn, is given, at the end of the Junior year, to the student having the highest standing in the courses in rhetoric, English composition, and public speaking. In making the award, regard is given to the number of such courses taken as well as to the rank attained in them. In 1910 this premium was awarded to

Morris Jacob Wessel

The Carpenter Premiums, two in number, are derived from the income of funds established in 1867, one by Thomas Carpenter and one by Lydia Carpenter. They are assigned at the end of the Senior year to the two members of the Senior class who, "already on scholarships, shall, in the judgment of the Faculty, unite in the highest degree the three most important elements

of success in life, —ability, character, and attainment." In 1910 these premiums were awarded to

ALBERT ARNOLD BENNETT *and* HOWARD ALFRED TABER

THE HOWELL PREMIUM. The income of a fund amounting to one thousand dollars, presented to the University in 1867 by Gamaliel Lyman Dwight, is given at the close of the second term of the Senior year to the student who, "having a good record of deportment, has the highest rank in Mathematics and Natural Philosophy." To be considered a candidate for the premium, a student must, in each term from the Freshman year to the end of the second term in the Senior year, take at least one of the elective courses in pure or applied mathematics. In 1910 this premium was awarded to

MAXWELL BARUS

THE CLASS OF 1873 PRIZE. The income of a fund of one thousand dollars, presented to the University by the class of 1873, is awarded each year to that member of the Senior class who writes the best essay on a historical or a philosophical subject. The subjects, which are of a historical nature one year and of a philosophical nature the next, are assigned by the respective departments. For 1910–11 the subject is: *A statement and criticism of the Socratic doctrine that "Virtue is Knowledge."* For 1909–10 the subject was: *The movement for imperial federation in Great Britain.* No prize was awarded.

THE FOSTER PREMIUM IN GREEK is derived from the income of a fund of three thousand dollars bequeathed to the University in 1880 by the Honorable Lafayette Sabine Foster, of the class of 1828. In accordance with the terms of the donor's will, the income of this fund is to be "annually paid to that scholar of the institution who passes the best examination in the Greek language, the examination to be made in the first, third, and twenty-fourth books of Homer's *Iliad*, or in the *Oration on the Crown* by Demosthenes." The examinations are open to the members of the Senior class. The next examination will be held early in May, 1911; candidates will be examined in the *Iliad.* In 1910, the premium was awarded to

WARREN CLIFFORD JOHNSON

A collateral premium was awarded to

CAROLINE MILLARD MORTON

THE LUCIUS LYON PREMIUMS IN LATIN are derived from the income of a fund of five thousand dollars presented to the University in 1893 by Mrs. Caroline L. Lyon, in memory of her husband, Lucius Lyon, of the class of 1844. Five-tenths of the income each year forms the first premium, three-tenths the second, and two-tenths the third. Any part of the income not needed in any given year must be added to the fund. The premiums are awarded on the basis of a special examination held during the last term of the Senior

year. The examination may relate to any or all of the following subjects: the Latin language, Roman literature, Roman history. The President of the University and the head of the Department of Roman Literature and History prescribe the conditions for admission to the examination. In 1910 no premiums were awarded.

The Bennett Prize. The income of a fund of four hundred dollars, established by Philo S. Bennett in 1905, will be awarded annually for an essay on Free Government. The conditions governing the competition will be announced later.

The Class of 1880 Prizes, established in 1905 by the class of 1880, are awarded each year to the undergraduates of Brown University who show the most ability in presenting arguments on some current question of importance to Brown University. The subject for discussion, the time, and the manner of presentation are all determined by representatives of the English department in consultation with the President of the Debating Union and the editors-in-chief of the *Brunonian* and the *Brown Daily Herald*. The prizes are awarded by a board of five judges: two are appointed by the President of the University, two by the undergraduate members of the committee in charge; the fifth is a member of the English department.

In 1911 a first prize of thirty-five dollars and a second prize of twenty-five dollars will be awarded to the students who show the most ability in a public discussion of the topic chosen. This discussion will be held on February 7; a preliminary discussion will be held on January 31. A first prize of twenty-five dollars and a second prize of fifteen dollars will be awarded to the writers of the best argumentative essays of from three thousand to five thousand words upon the same subject. The essays must be signed with an assumed name; they must be in the hands of the Registrar before 4 p.m., February 2. Either prize for the essay may be withheld if the judges deem it best. A student may enter both competitions. For 1911 the subject chosen is: *Are French and German more profitable college studies than Latin and Greek?* In 1910 these prizes were awarded as follows:

The first prize for the discussion to George Christian Stucker
The second prize for the discussion to Winfield Wardwell Greene
The prize for the essay, in equal parts, to Warren Clifford Johnson *and* Richard Day Allen

The Society of Colonial Dames Prize in American History. The income of a fund of fifteen hundred dollars, known as The Roger Williams Fund established by the National Society of Colonial Dames in the State of Rhode Island and Providence Plantations, given to the University in 1906, is awarded each year as a prize for the best essay on a subject in American colonial history. The competition is open to Juniors, Seniors, and Graduates, and to men and women on equal terms. Essays must show independent use

of authorities, and should, in general, extend to at least four thousand words. Detailed regulations governing the competition are announced from year to year, and the name of the successful competitor is announced at Commencement. The subject for the essay in 1910–11 is: *The Stamp Act in Rhode Island.* For 1909–10 the subject was: *The public life of Esek Hopkins.* The prize was awarded to

GERTRUDE HILDRETH CAMPBELL

THE BISHOP MCVICKAR PRIZES, founded by the late Rt. Rev. William N. McVickar, Bishop of the Protestant Episcopal Diocese of Rhode Island, and continued by his sister, Miss E. C. McVicar. A first prize of fifty dollars, and a second prize of twenty-five dollars, for the best essays of from three to four thousand words on a subject assigned by the Department of Biblical Literature. The competition is open to undergraduate men who are, or have been, students in the Department of Biblical Literature. Those who intend to compete must give their names to the head of the department not later than March 1, and essays, under an assumed name, must be delivered to the Registrar not later than the first Saturday in May. For 1910–11 the subject is: *Israel's settlement in Canaan.* For 1909–10 the subject was: *The relation of the Biblical writings to the life of their times.* The prizes were awarded as follows:

The first prize to WILLIAM LEARNED DEALEY
The second prize to EDWIN CARPENTER BOSWORTH

THE WILLIAM GASTON SCHOLARSHIP. This fund of five thousand dollars was established in 1899 by the widow and children of the Honorable William Gaston, LL.D., of the class of 1840. Its income is awarded annually by the Faculty solely upon merit, without reference to financial condition. For 1910–11 this scholarship was awarded to

DAVID JAMES PURDIE

THE GASTON PRIZE MEDAL FOR EXCELLENCE IN ORATORY. From the income of a fund of three thousand dollars established in 1894 as a memorial to the Honorable William Gaston, LL.D., of the class of 1840, a gold medal is annually awarded to the member of the graduating class who delivers the best original oration in English. The orations are not to exceed fifteen hundred words. In order to compete for the prize, a student must deposit with the Registrar a typewritten copy of his oration, signed with an assumed name, six weeks before the public competition. From these orations a committee appointed by the President of the University selects not more than six for delivery. The committee of award in the final contest consists of three members appointed by the President. In making the award, regard is given to thought, style, and delivery. The winner of the medal is entitled to deliver an oration at Commencement. In 1911 the orations must be deposited

with the Registrar on or before April 2; the public competition will be held on May 9. In 1910 this prize was awarded to

GOUGH DECATUR MCDANIELS

HONOR SCHOLARSHIPS

To encourage proficiency in studies and to provide recognition for successful application to college work, the Faculty has established Honor Scholarships without aid as follows:

THE JAMES MANNING SCHOLARSHIPS, awarded to those undergraduates whose work throughout the year has been of such excellence that they are deemed worthy of very high academic distinction.

In 1910 these scholarships were awarded as follows:

Class of 1910

Albert Arnold Bennett — Frank Le Forrest Mansur

Class of 1911

David James Purdie

Class of 1912

John Henry Williams

Class of 1913

Harold Allen Grout

THE FRANCIS WAYLAND SCHOLARSHIPS, awarded to those undergraduates who have shown marked excellence in their work, but have not attained the standard required for the James Manning scholarships.

In 1910 these scholarships were awarded as follows:

Class of 1910

Maxwell Barus — Howard Alfred Taber

Clifton Henry Walcott

Class of 1911

Philip Chadsey Curtis — John Vincent Keily

Class of 1912

Daniel Lucius Brown

Class of 1913

Leon Clifford High

APPOINTMENTS FOR COMMENCEMENT

At Commencement four members of the graduating class deliver original orations in English of not more than fifteen hundred words each. One speaker is the winner of the Gaston medal; the others are selected by the Faculty from nominations by the heads of departments. The basis of selection is

scholarship, ability to write, and ability to speak. The students thus appointed confer with the Professor of Rhetoric, who advises with them in regard to the choice and treatment of their subjects, and with the Professor of Public Speaking, who trains them in the delivery of their orations. Before Commencement each speaker must hand to the Professor of Rhetoric a copy of his oration for preservation in the University Library. In 1910 the speakers selected by the Faculty were:

Maxwell Barus Albert Arnold Bennett
Clifton Henry Walcott

FINAL HONORS

Final Honors in any department are awarded, at the completion of the studies leading to a bachelor's degree, to those who have secured: (1) A mark of H in courses in the department aggregating eighteen or more term hours; (2) a mark of C or H in eighty-five per cent of all their courses of study. In any department, however, certain specified courses may not be included in those counted for Final Honors. The names of all students awarded Final Honors are printed in the Commencement Program and in the Annual Catalogue. In 1910 the awards were as follows:

Kenneth Field Albee, *Biology, Chemistry.*
Maxwell Barus, *Mathematics, Physics.*
Albert Arnold Bennett, *Mathematics, Philosophy, Romance Languages and Literatures.*
Louis Robinson Collins, *Chemistry.*
John Prescott Farnsworth, Jr., *Chemistry.*
Albert Potter Farwell, *Chemistry.*
James Alexander Hall, *Mechanical Engineering.*
Roland Ellis Hutchins, *Civil Engineering.*
Warren Clifford Johnson, *English, Greek Literature and History.*
Harold Dane L'Amoureux, *Civil Engineering.*
Harold St. Clair McIntosh, *Civil Engineering.*
Frank Le Forrest Mansur, *English.*
Edward Holton Mason, Jr., *Biology, Chemistry.*
Warren Carney Norton, *Chemistry.*
Stephen David Paddock, *Mathematics.*
Howard Alfred Taber, *Mathematics, Physics, Roman Literature and History.*
Clifton Henry Walcott, *Philosophy.*

Agnes Marie Blain, *Romance Languages and Literatures, Germanic Languages and Literatures, History.*
Gwendolen Blodgett, *Romance Languages and Literatures.*

Dorothy Bourne, *Romance Languages and Literatures.*
Alice Frances Cook, *Germanic Languages and Literatures.*
Lillian Ruth Cosgrove, *English, History, Roman Literature and History.*
Frances Alice Crossley, *Germanic Languages and Literatures, Romance Languages and Literatures.*
Lydia Theodora Dobler, *English, Germanic Languages and Literatures.*
Caroline Millard Morton, *Greek Literature and History, Mathematics.*
Marion Augusta Richards, *Romance Languages and Literatures.*
Marjorie Maud Stone, *English, Greek Literature and History.*
Mary Clegg Suffa, *Astronomy, Mathematics.*
Leila Tucker, *History.*
Isabel Stuart Wood, *Germanic Languages and Literatures.*

DEGREES CONFERRED IN 1910

DEGREES IN COURSE

BACHELOR OF ARTS

Richard Day Allen
Donald Sturges Babcock
Maxwell Barus
Albert Arnold Bennett
Afley Leonel Brett
William Bailey Bruce
Harold Stephen Bucklin
Walter Chester Cameron
Andrew Burroughs Comstock
Herman Copeland
Henry Chester Damon
Arthur Daniel Draper
Everett Percy Frohock
William Edward Gannon
Walter Edward Goodwin
Raymond Keyes Gould
John Patrick Hartigan
Herman Hartwell Haskins
Henry Horace Hibbs, Jr.
Norman Edward Holt
Elmer Stuart Horton
Paul Balcom Howland

Agnes Marie Blain
Gwendolen Blodgett
Elizabeth Marie Boardman
Dorothy Bourne
Alma Romaine Brown
Harriet Josephine Buck
Annie Esther Burnside
Mabel Kincaid Bushell
Alice Frances Cook
Lillian Ruth Cosgrove
Florence Alice Crossley
Marion Elizabeth Dean

Will Clarence Ingalls, Jr. *With the class of* 1909
Malcolm Royce Jeffris
Warren Clifford Johnson
Joseph Berry Keenan
William Hardy Kent
William Harkins Lynn
Frank Le Forrest Mansur
Ernest Mariett Morris
John Henry Morrissey, Jr.
Robert Lewis Munson
Frank Joseph O'Donnell
Harry Lees Oldfield
Joseph Edwin Oslin
Stephen David Paddock
Stephen Donald Pyle, Jr.
Lester Angell Round
William Sheldon Sweet
Howard Alfred Taber
Clifton Henry Walcott
Harold Leslie Wheeler
Alan Jewett Young

Lydia Theodora Dobler
Helen Emilie Gindele
Elizabeth Morrison
Caroline Millard Morton
Hazel Louise Raybold
Marion Augusta Richards
Bernice Estelle Sears
Marjorie Maud Stone
Mary Clegg Suffa
Leila Tucker
Mildred Corinne Williams
Isabel Stuart Wood

BACHELOR OF PHILOSOPHY

Kenneth Field Albee
James Madison Aldrich
Gaius Humphrey Barrett
Charles Walter Briggs, Jr. *With the class of* 1909
George Wyman Carroll, Jr. *With the class of* 1909
Louis Robinson Collins
Willis Garrett Conant
Roy Tasco Davis
William Washington Dove. *With the class of* 1909
Albert Farnsworth
John Prescott Farnsworth, Jr.
Albert Potter Farwell
Raymond Edward Fenner
William Belfield Freeman
John Lawrence Gorman
Winfield Wardwell Greene
Walter Brooks Henderson
Maxwell Krause
Harry Badger Lane
Gough Decatur McDaniels
Edward Halton Mason, Jr.
James Matthias Mercer
Merritt Manville Meredith
Benjamin Dwight Miller
Warren Carney Norton
Ralph Mallory Palmer
Albert Nathaniel Peterson
Charles Addison Post
Ralph Weeden Reckling
Robert Francis Seybolt
Edward John Shaeffer
James Chute Simpson
James Smalley, Jr.
Bertram Smith
Edward Sheldon Spicer
Harold Avery Swaffield
Frederic Louis Trover
Clifton Berkely Ward
Henry Max Webber
Franklin Lyron Wheeler
Ralph Henry Wilmarth

Gertrude Mary Allen
Stella Risley Clemence
Alice Scott Maile
Abigail Deborah Steere
Alice Ida Sweet
Alice Mary Wilbur

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

William Coggeshall Anthony
Joseph Eli Bliss
Earle Francis Caton
Richard Alexander Colmetz
Ralph Beach Farnum
Arthur Mathias Ham
John Collins Hennessy
Roland Ellis Hutchins
Seth Maurice Kalberg
George Holmes Kelley
Harold Dane L'Amoureux
Harold St. Clair McIntosh
William Dexter Morrill
Alexander Wicliffe Muir
Harry Bernard O'Neil
George Luther Pierce, Jr.
Carl Ruehl Raquet
Thomas Russell Symmes
Eddy Warren Tandy
Henry Bangs Thacher
Lawrence Sidney Walker
Edward Walter Wall

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Paul George Wilfred Anderson
Carl Winslow Atwood
Leonidas Franklin Clark
James Alexander Hall, A.B.
Keith Mercer
William Charles Oakes
George Arthur Round
Frank Allen Wightman. *With the class of 1909*

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Joseph Henry Cull
Earl Herbert Williams

FOR THE DEGREE OF MASTER OF ARTS

Maxwell Barus
Albert Arnold Bennett
Charles Barrows Bennett, Ph.B.
Ralph Philip Boas, A.B.
Clarence William Bosworth, A.B.
Louise Adams Bourne, A.B.
John Wymond Miller Bunker, A.B.
Ada Irene Burton, A.B.
Samuel James Cann, A.B., D.B.
Marion Shirley Cole, Ph.B.
Harry Wright Collins, A.B.
Lillian Ruth Cosgrove
Mary Carr Crowell, Ph.B.
Florence Harris Danielson, A.B.
Charlotte Christabell Delany, Ph.B.
Katharine Everett, A.B.
Cardinal Leonidas Goodwin, A.B.
Grover Graham, A.B.
Ernest Russell Hager, A.B.
Benjamin Louis Antoine Hénin
B. ès L., LL.B.
Joseph Berry Keenan
Louis Augustine McCoy, A.B.
Charles Frederick Marks, A.B.
Alice Rhodes Martin, Ph.B.
Alfred John Olsen, Jr., Ph.B.
Stephen David Paddock
Ethel Ida Rowand, A.B.
Robert Clark Sanger, A.B.
Cora Edna Sisson, Sc.B.
James Smalley, Jr.
George Hathorn Smith, A.B.
Alvin Swindell, A.B.
George Francis Sykes, Ph.B.
Sarah Ellen Taylor, A.B.
Roy Towne, A.B.
Frederic Louis Trover
Eleanor Stuart Upton, A.B.
Hovhannés Zovigian, Ph.B.

MASTER OF SCIENCE

Charles Barrows Bennett, Ph.B.
Robert Foster Chambers, Ph.B.
Moses Leverock Crossley, Ph.B.
Robert Campbell Weed, Ph.B.

DOCTOR OF PHILOSOPHY

Henry Carroll Tracy, A.M.

THESIS: "The Morphology of the Swimbladder in Teleosts."

HONORARY DEGREES

MASTER OF ARTS

HENRY AMES BARKER
WALTER PERLEY HALL
DANIEL BERKELEY UPDIKE

DOCTOR OF DIVINITY

WILLIAM COLEMAN BITTING

DOCTOR OF LAWS

JOHAN HEINRICH VON BERNSTORF
EDWARD CHURCH DUBOIS
SAMUEL CHILES MITCHELL

LIST OF STUDENTS

GRADUATES

Sara MacCormack Algeo — *Providence*
A.B. (*Boston University*) 1899. Romance Languages, Economics. Registered candidate for A.M.

Edward Bartlett Allen — *Centreville*
Biology, Chemistry, Botany. Enrolled candidate for A.M.

Carol Aronovici — *Providence*
Litt.B. (*Gymnasium of Bucharest*) 1898; B.S.A. (*Cornell University*) 1905. Social Science, Biology. Enrolled candidate for Ph.D.

Charles Raymond Austin — *Providence*
A.B. (*Brown University*) 1902; A.M. 1903. Latin, Greek, English. Enrolled candidate for Ph.D.

Jane Barclay — *Ontario, Canada*
Ph.B. (*Brown University*) 1903; A.M. 1904. Social Science. Registered candidate for Ph.D.

Ivan Elijah Baxter — *Waco, Texas*
A.B. (*Baylor University*) 1910. Latin, Greek, Philosophy. Enrolled candidate for A.M.

Albert Arnold Bennett — *Providence*
A.B., A.M. (*Brown University*) 1910. Mathematics, Mechanics, Philosophy. Enrolled candidate for M.S.

Elizabeth Marie Boardman — *Providence*
A.B. (*Brown University*) 1910. Education, Latin, Biblical Literature. Enrolled candidate for A.M.

Agnes Constance Brady — *Fall River, Mass.*
A.B. (*Trinity College*) 1910. English.

William Alva Brady — *Narragansett Pier*
Ph.B. (*Brown University*) 1894; A.M. 1908. History, Education. Registered candidate for Ph.D.

William Ward Browne — *Lynn, Mass.*
A.B. (*Brown University*) 1908; A.M. 1909. Bacteriology, Comparative Anatomy. Enrolled candidate for Ph.D.

Anna Carrique Buffington — *Providence*
Ph.B. (*Brown University*) 1900. English. Registered candidate for A.M.

John Wymond Miller Bunker — *Newton Centre, Mass.*
A.B. (*Brown University*) 1909; A.M. 1910. Bacteriology, Comparative Anatomy. Enrolled candidate for Ph.D.

Charles Augustine Carman — *Granville, Ohio*
A.B. (*Denison University*) 1909. Biblical Literature. Enrolled candidate for A.M.

Martha Warren Case — *Providence*
A.B. (*Brown University*) 1907. Education, Social Science, History. Enrolled candidate for A.M.

Robert Foster Chambers — *Providence*
Ph.B. (*Brown University*) 1909; M.S. 1910. Chemistry, Bacteriology. Registered candidate for Ph.D.

Robert John Chrystie — *Providence*
Ph.D. (*Tayler University*) Biblical Literature.

Annie Cocks Clark *Providence*
Ph.B. (*Brown University*) 1907. Social Science, Education. Registered candidate for A.M.

Roaldo Franklin Colwell *Barrington*
Ph.B. (*Brown University*) 1876. History.

Andrew Burroughs Comstock *Providence*
A.B. (*Brown University*) 1910. Economics, Social and Political Science, History. Enrolled candidate for A.M.

Lillian Ruth Cosgrove *Brockton, Mass.*
A.B., A.M. (*Brown University*) 1910. English, Education. Registered candidate for Ph.D.

Albert Moses Cristy *Easthampton, Mass.*
A.B. (*Brown University*) 1909. History, Economics. Registered candidate for A.M. *in absentia.*

Florence Alice Crossley *Providence*
A.B. (*Brown University*) 1910. Education. Registered candidate for A.M.

Moses Leverock Crossley *Providence*
Ph.B. (*Brown University*) 1909; M.S. 1910. Chemistry, Biology. Enrolled candidate for Ph.D.

Nelson Clarke Dale *Pittsfield, Mass.*
B.S. (*Middlebury College*) 1908; A.M. (*Brown University*) 1909. Geology, Chemistry. Registered candidate for Ph.D.

Anne Marguerite Day *Providence*
A.B. (*Vassar College*) 1898. Registered candidate for A.M.

Walter William Deckard *Arlington*
B.S. (*Rio Grande College*) 1893; A.B., B.D. (*Hillsdale College*) 1899; A.M. (*Brown University*) 1905. Social and Political Science, Philosophy. Enrolled candidate for Ph.D.

Katherine Helen Degnan *Providence*
A.B. (*Trinity College*) 1910. Chemistry, Biology, Physics. Enrolled candidate for A.M.

Theodore Everett Dexter *Central Falls*
A.B. (*Brown University*) 1898. Social and Political Science. Enrolled candidate for A.M.

Grove Samuel Dow *New Bedford, Mass.*
A.B. (*William Jewell College*) 1909. Social Science, Economics. Enrolled candidate for A.M.

Albert Farnsworth *Lawrence, Mass.*
Ph.B. (*Brown University*) 1910. Education. Registered candidate for A.M.

John Prescott Farnsworth, Jr. *Providence*
A.B. (*Brown University*) 1910. Electrical Engineering.

Albert Potter Farwell *Providence*
Ph.B. (*Brown University*) 1910. Chemistry, Biology, German. Enrolled candidate for A.M.

Raymond Edward Fenner *Providence*
Ph.B. (*Brown University*) 1910. Education. Enrolled candidate for A.M.

Robert Franklin Field *Providence*
A.B. (*Brown University*) 1906; A.M. 1907. Physics, Mathematics. Registered candidate for Ph.D.

Charles Edward Fisher *Providence*
A.B. (*St. Lawrence University*) 1898. Mathematics, Education. Registered candidate for A.M.

Fred K. Fleagle *St. Johns, Mich.*
A.B. (*University of Michigan*) 1907. Education. Registered candidate for A.M. *in absentia.*

Louis John Gillespie *Manchester, N. H.*
Ph.B. (*Brown University*) 1908. Bacteriology, Physics. Enrolled candidate for Ph.D.

Grover Graham *Fredericktown, Mo.*
A.B. (*William Jewell College*) 1909; A.M. (*Brown University*) 1910. Social and Political Science. Registered candidate for Ph.D.

Ernest Russell Hager *Auburn*
A.B. (*Brown University*) 1909; A.M. 1910. Education.

Ransom Harvey, Jr. *La Grange, Mo.*
A.B. (*Shurtleff College*). Education, Physics. Enrolled candidate for A.M.

Henry Horace Hibbs, Jr. *Williamsburg, Ky.*
A.B. (*Brown University*) 1910. Social Science. Registered candidate for A.M. *in absentia.*

Elizabeth Cathcart Hickson *Gwynedd Valley, Pa.*
B.S. (*University of Pennsylvania*) 1910. Biology, Chemistry. Enrolled candidate for A.M.

George Herbert Holt *Jamestown*
A.B. (*Ottawa University*) 1907; B.D. (*Newton Theological Seminary*) 1910. Biblical Literature, Philosophy. Enrolled candidate for A.M.

Norman Edward Holt *Providence*
A.B. (*Brown University*) 1910. Chemistry, Mathematics, Physics, Enrolled candidate for M.S.

Lloyd Randolph Killam *Winfield, Mo.*
A.B. (*William Jewell College*) 1908. Political and Social Science, Biblical Literature. Enrolled candidate for A.M. *in absentia.*

Frank Edwin Lakey *Allston, Mass.*
A.B. (*Brown University*) 1894; A.M. 1900. Social and Political Science, Education. Enrolled candidate for Ph.D.

Ralph Arthur Lane *Boston, Mass.*
A.B. (*Brown University*) 1904. Mathematics, Education. Registered candidate for A.M. *in absentia.*

Leslie Leland *Concord, Mass.*
A.B. (*Smith College*) 1910. Mathematics. Registered candidate for A.M.

Herman Adolph Liebig *Ann Arbor, Mich.*
A.B. (*University of Michigan*) 1895. German, Philosophy. Enrolled candidate for A.M.

Herbert Collins Long *Denver, Colo.*
A.B. (*William Jewell College*) 1910. English, Greek. Registered candidate for A.M.

John Joseph Long *Woonsocket*
A.B. (*Brown University*) 1907. Mechanical Engineering, Mechanics. Registered candidate for M.S.

Elise Emeline McCausland *Providence*
A.B. (*Brown University*) 1909. Education, Greek. Enrolled candidate for A.M.

Omar Roscoe McCoy *Olneyville*
A.B. (*Brown University*) 1909. Education, Social Science. Enrolled candidate for A.M.

Robert McBurney Mitchell *Providence*
A.B. (*University of Chicago*) 1903. German, English. Enrolled candidate for Ph.D.

Margaret Julia Morgan *Providence*
A.B. (*Brown University*) 1909. Romance Languages. Registered candidate for A.M.

Caroline Millard Morton *Providence*
A.B. (*Brown University*) 1910. Greek, Latin, German. Enrolled candidate for A.M.

Eugene Richard Musgrove *Bristol, N. H.*
B.S. (*Dartmouth College*) 1905. English, Education. Registered candidate for A.M. *in absentia*

Katherine Upham Peirce *Providence*
A.B. (*Vassar College*) 1889. History. Enrolled candidate for A.M.

Fred Hale Pierce *Danielson, Ct.*
A.B. (*Brown University*) 1908. Social Science, Education. Registered candidate for A.M. *in absentia.*

Harry Emery Pratt *Attleboro, Mass.*
A.B. (*Colby College*) 1902. Education. Registered candidate for A.M.

John Donald Pryor *South Orange, N. J.*
Ph.B. (*Brown University*) 1908. English, Philosophy. Enrolled candidate for A.M.

Thomas Henry Quigley *Taunton, Mass.*
Latin, History, Greek. Enrolled candidate for A.M.

Elmer Jeremiah Rathbun *Providence*
A.B. (*Brown University*) 1896; LL.B. (*Boston University*) 1898. History. Registered candidate for A.M.

Henry Lansing Rossire *Yonkers, N. Y.*
M.E. (*Cornell University*) 1908. Social Science, Education. Registered candidate for A.M.

Lester Angell Round *Clayville*
A.B. (*Brown University*) 1910. Biology, Italian, Chemistry. Enrolled candidate for A.M.

Louise Adele Ruddiman *New York, N. Y.*
A.B. (*Wellesley College*) 1910. Education. Registered candidate for A.M.

Robert Francis Seybolt *Staten Island, N. Y.*
Ph.B. (*Brown University*) 1910. Education, Social Science, Philosophy. Enrolled candidate for A.M.

Israel Remington Sheldon *Pawtuxet*
Geology, Civil Engineering. Enrolled candidate for M.S.

Margaret Elizabeth Shepard *Barrington*
A.B. (*Wellesley College*) 1910. Education. Registered candidate for A.M.

John Smith Shippee *East Greenwich*
A.B. (*Brown University*) 1894. Latin, Greek. Enrolled candidate for Ph.D.

Lester Burrill Shippee *Providence*
A.B. (*Brown University*) 1903; A.M. 1904. History, Social and Political Science. Enrolled candidate for Ph.D.

Bina May Shorey *Providence*
English, Philosophy. Enrolled candidate for A.M.

Claris Edwin Silcox *Toronto, Canada*
A.B. (*Toronto University*) 1909, English, Biblical Literature, Social Science. Registered candidate for A.M.

George Hathorn Smith *Meredith, N. H.*
A.B. (*Bates College*) 1909; A.M. (*Brown University*) 1910. Biology. Registered candidate for Ph.D.

Walter Edward Sullivan *Houlton, Me.*
A.B. (*Bates College*) 1907; A.M. (*Brown University*) 1909. Comparative Anatomy, Bacteriology. Registered candidate for Ph.D.

Harold Avery Swaffield *Lawrence, Mass.*
Ph.B. (*Brown University*) 1910. Biology, Biblical Literature, Social Science. Registered candidate for A.M.

Kotaro Tanaka *Tokyo, Japan*
B.S. (*Muhlenberg College*) 1910. Chemistry. Enrolled candidate for M.S.

Charles Carpenter Tillinghast *Saxton's River, Vt.*
A.B. (*Brown University*) 1906. English, Education. Registered candidate for A.M. *in absentia.*

Mildred Corinne Williams *Providence*
A.B. (*Brown University*) 1910. Latin, French, History, Philosophy. Enrolled candidate for A.M.

SENIORS: CLASS OF 1911

NAME	RESIDENCE
Edward Bartlett Allen	*Warwick*
John Albert Anderson	*Providence*
Paul Appleton	*Providence*
James Coutts Archie	*Westerly*
Earle Bernon Arnold	*North Scituate*
Vernon Edgar Babington	*Cranston*
Matthias Wisen Baker, Jr.	*Providence*
Harold Oakley Barker	*Stamford, Ct.*
Charles Archilaus Barry	*Port Huron, Mich.*
Joshua Beliavsky	*Providence*
Robert Wellington Bingham, Jr.	*East Haddam, Ct.*
Earle Francis Bliss	*Attleboro, Mass.*
Harold Borden Bliss	*Barrington*
Edwin Carpenter Bosworth	*Foxboro, Mass.*
Andrew Lyndon Breckenridge	*Providence*
John Bernard Brennan, Jr.	*Providence*
Wendell Stimpson Brown	*Providence*
Franklin Abbott Buck	*Mansfield, Mass.*
Henry Morgan Burke	*Providence*
Chester Thomas Calder	*Providence*
Robert Henry Munson Canfield	*Bridgeport, Ct.*
Everett Shearman Carpenter	*Cumberland*
Benjamin Harold Cate	*Providence*
Clifford John Cawley	*Providence*
Herbert Frederick Cawthorne	*Leominster, Mass.*
Linwood Collins Chase	*Plainville, Mass.*
Robert Dexter Chase	*Pawtucket*
John Osborne Chesley	*Providence*
Arthur Chessman Clark	*Newton Centre, Mass.*
John Clarence Clark	*Little Falls, N. Y.*
Clarence Sawyer Cleasby	*Providence*
Herbert Ray Connor	*Alameda, Cal.*
Alfred Elwood Corp	*Providence*
Philip Chadsey Curtis	*Pawtucket*
Earl Balcom Dane	*Providence*
Silas Benjamin Dishman, Jr.	*Barbourville, Ky.*

NAME	RESIDENCE
Earl Raymond Donle	*Providence*
Edwin Arthur Dow	*Eden Park*
Frank Otis Drowne	*Pawtucket*
Herbert Eddy Easton	*Central Falls*
John Ervin, Jr.	*Pawtucket*
Ernest Sherman Fitz	*Saylesville*
John Howard Forrist	*Providence*
Herbert Briggs Francis	*Taunton, Mass.*
Charles Miller Franklin	*Pawtucket*
Michael Henry Gallagher	*Wellesley, Mass.*
Lawrence Gardner	*Portland, Me.*
Robert Nichols Gardner	*Portland, Me.*
Guy Harold Gifford	*Providence*
William Clement Giles	*Springfield, Mass.*
Allan Westcott Greene	*Barrington*
Walter Gardiner Harrington	*Providence*
Wright David Heydon	*Centreville*
Jacob Freeman High	*Bedminster, Pa.*
John Edward Hinckley	*Barnstable, Mass.*
John Sprague Hodgson	*Enfield*
Samuel Morey Holman, Jr.	*Attleboro, Mass.*
Jacob Mark Howarth	*Swansea, Mass.*
Harry Robinson Howe	*Mansfield, Mass.*
George Henry Howes	*New Bedford, Mass.*
Howard Greenough Hubbard	*Providence*
Earl Edmund Jackson	*Providence*
Walter Wade Jackson	*Woodward, S. C.*
Seward Thompson Jarvis	*Somerville, Mass.*
Frederic Marshall Jencks	*West Barrington*
Clare Steele Johnston	*Buffalo, N. Y.*
John Vincent Keily	*Providence*
Arthur Kiernan	*Providence*
John Baptist Kindelan	*New York, N. Y.*
Charles Manton King	*Mt. Hermon, Mass.*
Ira Winsor Knight	*Auburn*
Harold Leslie Kohler	*New York, N. Y.*
James Charles Larkin	*Pittsfield, Mass.*
Charles Leon Leland	*Grafton, Mass.*
James Russell McKay	*Youngstown, Ohio*
Percy Douglas McPhee	*Newton, Mass.*
Mark Mohler	*Los Angeles, Cal.*
John McGill Montz	*Charlottesville, Va.*
George Denny Moore	*Cheswold, Del.*

NAME	RESIDENCE
Courtland Sawin Mudge	*Providence*
Harold Edward Muir	*Newton, N. J.*
Frederick Leo Mulcahy	*Lawrence, Mass.*
Robert Cushman Murphy	*Mt. Sinai, N. Y.*
Joseph Serpa Neves	*Providence*
Lewis Alfred Newfield	*Brooklyn, N. Y.*
Christopher Aloysius Nolan	*Providence*
James Timothy O'Neil	*Amesbury, Mass.*
Arthur Palmer	*Grand Rapids, Mich.*
Harry Arthur Pantaenius	*Morristown, N. J.*
Samuel Ryder Parks	*Pawtucket*
Beverly Francis Perry	*Syracuse, N. Y.*
Irving Wilbert Pettengill	*Haverhill, Mass.*
Thomas Aquinas Pickett	*Bridgewater, Mass.*
Leroy Gardiner Pilling	*Providence*
David James Purdie	*Providence*
Thomas Henry Quigley	*Taunton, Mass.*
Joseph Ernest Raia	*Providence*
Royal Paul Richardson	*Dighton, Mass.*
Roger Sherman Robinson	*Laconia, N. H.*
Fremont Emerson Roper	*Riverpoint*
Julius Adolph Saacke	*Providence*
Judah Semonoff	*Providence*
Robert Godfrey Shaw	*Providence*
Israel Remington Sheldon	*Pawtuxet*
Lewis Alexander Shepherd	*Springfield, Mass.*
Warren Andrew Sherman	*Providence*
Charles Peck Sisson	*Providence*
Russell Eyre Sisson	*Providence*
Schuyler Merritt Skelding	*Stamford, Ct.*
Robert Fulton Skillings	*Portland, Me.*
Brenton Greene Smith	*New York, N. Y.*
Warren Hutchinson Smith	*Lincoln*
Arthur Edgar Staff	*Campello, Mass.*
George Christian Stucker	*Providence*
George Frederick Swanson	*Boston, Mass.*
Albert Whitman Sweet	*Providence*
Wendell Richardson Swint	*East Boston, Mass.*
Raymond Samuel Taylor	*Monohan, Wash.*
Erwin Clayberg Tompkins	*Avon, Ill.*
Harold Wallace	*Chicago, Ill.*
David Fogg Watson, Jr.	*Bridgeport, Ct.*
Morris Jacob Wessel	*Port Norris, N. J.*

NAME	RESIDENCE
Joseph Timothy Witherow	*Pawtucket*
Allen Arthur Wood	*Providence*
Ellis Laurie Yatman	*Providence*
Foster Verne Young	*Aylesford, N. S.*
Joseph Zarmon	*Paterson, N. J.*

JUNIORS: CLASS OF 1912

Edward August Adams	*Fort Dodge, Ia.*
Ryland Benjamin Andrews	*Leominster, Mass.*
Charles Fulda Archambault	*Arctic*
Clarence Edwin Ayres	*Westfield, Mass.*
Ernest Stratton Barker	*New York, N. Y.*
Frank Clifford Barrows, Jr.	*New Bedford, Mass.*
James Henry Beattie	*Brunswick, Vt.*
Kenly Smith Bell	*East Orange, N. J.*
Harvey Earl Bingham	*Quaker Hill, Ct.*
Preble Wilson Blake	*Amesbury, Mass.*
Stuart Blake	*Lonsdale*
Eastwood Howard Boardman	*Central Falls*
Harold Schenck Borden-Smith	*Salem, N. Y.*
Daniel Lucius Brown	*Norwich, Ct.*
Harry Gilbert Brown	*Providence*
John Watson Brown	*Providence*
Arthur Francis Buddington	*West Mystic, Ct.*
Hermon Carey Bumpus, Jr.	*New Rochelle, N. Y.*
Frederick Burgess, Jr.	*Garden City, N. Y.*
George Sargent Burgess	*Portland, Me.*
Warren Randolph Burgess	*Providence*
Carl Edmond Burnham	*Pawtucket*
Leroy Francis Burroughs	*Pawtucket*
Edgar Gibson Buzzell	*Chicago, Ill.*
Robert Gamble Caswell	*Wakefield*
Ralph Harold Chadwick	*Hillsboro, N. H.*
Adolph Odin Christianson	*Boston, Mass.*
Alfred Samuel Cloues	*Warner, N. H.*
Leo Cohen	*Providence*
Sheldon Chalkley Collins	*Great Barrington, Mass.*
Joseph Harrison Conzelman	*Bristol, Ct.*
James Lloyd Crawshaw	*Providence*
Lloyd Roswell Cummings	*Bradford, N. H.*
William Walter Cummings	*Providence*
Ernest Merrill Daland	*Wakefield, Mass.*

NAME	RESIDENCE
Wilbur Stone Deming	*Sharon, Mass.*
Robert Cloutman Dexter	*Dorchester, Mass.*
William Hovey Dinkins	*Selma, Ala.*
Lionel Victor Domin	*Providence*
Daniel Gerald Donovan	*Providence*
Ralph Sherwin Drury	*Fitchburg, Mass.*
Adelbert Charles Eastburn	*Yonkers, N. Y.*
James Cornelius Elms, Jr.	*East Orange, N. J.*
Walter Johnson Emmons	*Arlington*
Theodore Bryant Farnsworth	*Providence*
Orrin Robinson Ferry	*Whitinsville, Mass.*
Thomas Lester Fletcher	*Chardon, Ohio*
Paul Hart Francis	*Providence*
Clarence Frank Gifford	*Danielson, Ct.*
John Joseph Gilbert	*Woonsocket*
Willard Fremont Gordon, Jr.	*Hermanville, Miss.*
Matthew Gormly, Jr.	*Providence*
Abraham Harry Gretsch	*New York, N. Y.*
Joseph Dydime Guillemette	*Pawtucket*
Edwin Rogers Handy	*Manville*
Raymond Preston Hawes	*Riverside*
Hoey Hennessy	*Brooklyn, N. Y.*
Rodney Williams Hewitt	*Lebanon, Ct.*
Clifford Dean Hindle	*Central Falls*
Preston Hart Hood	*Fall River, Mass.*
Hawthorne Howland	*Pawtucket*
Karl Humphrey	*Providence*
Ralph Gibney Hurlin	*Antrim, N. H.*
Wellington LeRoy Jencks	*Providence*
Harry Muse Jones	*McKeesport, Pa.*
Howard Prann Jones	*Suffield, Ct.*
George Valentine Kendall	*St. Louis, Mo.*
Lowell Clapp Kendrick	*Hempstead, N. Y.*
Harry Willey Kenney	*Arlington*
Charles Roland Klebes	*West Coxsackie, N. Y.*
Archibald Collins Ladner	*Springfield, Mass.*
George Woodward Langdon	*Newburyport, Mass.*
Royal Willis Leith	*Lowell, Mass.*
Jerome Francis Joseph McGehearty	*Providence*
John Terence Campbell McGuire	*Fall River, Mass.*
John Francis McLaughlin	*Providence*
Howard Gove MacMillan	*Mapleville*
Charles Ambrose Malloy	*Lambertville, N. J.*

NAME	RESIDENCE
Wiley Hammond Marble	*Worcester, Mass.*
Henry Gildersleeve Marsh	*Providence*
Stanley Pearsall Marsh	*Westfield, N.J.*
Romeo Raoul Martel	*Pawtucket*
Lewis Leroy Mellor	*Guilford, Me.*
Clarence Walker Miller	*Pawtucket*
Everett Howe Miller	*South Hadley Falls, Mass.*
Samuel Lyman Mitchell	*Segundo, Col.*
Nicholas Van Slyck Mumford	*Providence*
Dana Gardner Munro	*Madison, Wis.*
Kenneth Leland Nash	*South Weymouth, Mass.*
Samson Nathanson	*Central Falls*
Walter Chadwick Nelson	*Fall River, Mass.*
Arthur Franklin Newell	*Boston, Mass.*
Earl Hagadorn Noyes	*East Greenwich*
Fred Blanchard Oakes	*Pawtucket*
Francis Dyer O'Connor	*Portland, Me.*
Carlton Hall Parker	*North Attleboro, Mass.*
Wyman Pendleton	*Youngstown, Ohio*
Earl Philo Perkins	*Providence*
Fred Clarence Perry	*Brockton, Mass.*
William Lester Phillips	*Auburn*
Mellen Howard Pingree	*Auburn, Me.*
Milledge Moses Purdy	*Wilton, N.H.*
Wilbur Bertram Purvis	*Norwich, Ct.*
Frederick George Rawlings	*Providence*
George Anton Repko	*New York, N.Y.*
James Vincent Ricci	*Providence*
Milton Elmer Roberts	*Somersworth, N.H.*
Walter Colburn Robertson	*Warwick*
William Henderson Robertson	*Lonsdale*
Harry Edward Roelke	*Frederick, Md.*
Warren Root	*Providence*
Edwin Maurice Rose	*Providence*
Maurice Rosen	*Taunton, Mass.*
John Harvey Rowland	*Shelburne Falls, Mass.*
Albert Curtis Ruger	*Providence*
Harold Preston Salisbury	*Providence*
William Frederick Scholze, Jr.	*Saylesville*
Frederick William Seagrave	*Slatersville*
Alan Arthur Slade	*Arlington, N.J.*
Albert Leonard Slade	*Touisset, Mass.*
Harold Everett Smiley	*Providence*

NAME	RESIDENCE
Irving Russell Smith	*Arlington, N. J.*
Leon Edward Smith	*Block Island*
George Herbert Spencer	*East Greenwich*
William Earl Sprackling	*Cleveland, Ohio*
Herbert Winter Stanley	*Plymouth, N. H.*
Harry Melvin Sutton	*Keene, N. H.*
Kenneth James Tanner	*Providence*
Frederick Leonard Tedford	*North Stoughton, Mass.*
Ernest Albert Tewksbury	*Middlefield, Ct.*
John Von der Lieth	*Hoboken, N. J.*
Ferdinando Votta	*Providence*
Edward Emory Warner	*West Fitchburg, Mass.*
William Andrew Weidmann	*Arlington*
George Bennett Weston	*Wollaston, Mass.*
Howard Carlton White	*Providence*
Harold Alexander Wilcox	*Providence*
Allen Burnett Williams	*Riverside*
John Henry Williams	*North Adams, Mass.*
Alfred Howard Williamson	*Providence*
Robert Henry Wills	*Rochester, Mass.*
Richard Bartley Wilson	*Youngstown, Ohio*
John Tracey Winterich	*Providence*
Herbert Edward Wolfe	*West Mystic, Ct.*
Henry Augustus Wood	*Bangor, Me.*
Rhodes Walter Zallee	*St. Louis, Mo.*

SOPHOMORES: CLASS OF 1913

Charles Harlan Abbott	*Antrim, N. H.*
Willard Bullock Anthony	*Providence*
Preston Franklin Arnold	*Touisset, Mass.*
Samuel Tomlinson Arnold	*Fall River, Mass.*
Simon Louie Aron	*Providence*
Russell Gilman Ashbaugh	*Youngstown, Ohio*
William Emerson Bailey	*Montpelier, Vt.*
Herbert Clarence Banks	*Fredonia, N. Y.*
Dennis Francis Barry	*Warren, Mass.*
Walter Jason Bass	*Hyde Park, Mass.*
Raymond James Bennell	*Morristown, N. J.*
Frank Carleton Blake	*Providence*
Earle Henry Blanchard	*Readsboro, Vt.*
Edward Payson Blanchard	*Linwood, Mass.*
Charles Harold Blomberg	*Brooklyn, N. Y.*

NAME	RESIDENCE
George Boas	*Providence*
Leighton Teeterick Bohl	*Edgewood*
Edward Luther Brackett	*Boston, Mass.*
Francis James Brady	*Providence*
Leon Royden Briggs	*Providence*
Harry Chamberlain Brown	*Marblehead, Mass.*
LeRoy Carrier Brown	*North West Chester, Ct.*
James Worth Brownville	*Needham, Mass.*
Marmaduke Cope Buffum	*Newport*
Charles Elton Burgess	*New Bedford, Mass.*
Ralph Everett Burnham	*Central Falls*
Joseph Knowles Burwell	*Providence*
Leon Hartshorn Carr	*Bradford, N. H.*
James Russell Case	*South Acton, Mass.*
John Casey, Jr.	*Providence*
Henry Richmond Chace, Jr.	*Providence*
Myron Reuben Chace	*Dighton, Mass.*
Frank Allen Chase	*Mansfield, Mass.*
Walter Irving Clark	*North Attleboro, Mass.*
Richard Vance Coburn	*Manchester, N. H.*
Porter Durant Collins	*Guilford, N. H.*
Raymond Carpenter Colwell	*Olneyville*
Edmund Barker Conant	*Palmyra, N. Y.*
Joseph Edward Cook	*Uxbridge, Mass.*
Frederick Eames Cooper	*Providence*
Everett Thomas Cripps	*Providence*
Lawton Vincent Crocker	*Chester, Vt.*
George Marsden Crowther	*Pawtucket*
Ralph Brinckerhoff Crum	*Poughkeepsie, N. Y.*
John Houston Cushman	*Guilford, Me.*
Francis Perry Davis	*Providence*
Earle Raymond Delano	*Newburyport, Mass.*
Herbert Knight Dennis	*East Greenwich*
William Earl Dodge	*Block Island*
Harold Faunce Dumbleton	*Springfield, Mass.*
Elisha Chester Durfee	*Arlington*
William Raymond Eastwood	*Providence*
Herbert Edward Field	*Providence*
Russell Watts Field	*Barrington*
Frederic Robert Gaiser	*Meriden, Ct.*
Karl Dana Gardner	*Swansea, Mass.*
Walter Hibberd Garrett	*Chadds Ford, Pa.*
Victor Carl Gelb	*Providence*

NAME	RESIDENCE
Frank Bradford Gibbs	*West Barrington*
Jeffrey Solon Goldberg	*New York, N. Y.*
Adrian Gordon Gould	*Youngstown, Ohio*
Benjamin Harry Grossman	*Providence*
Harold Allen Grout	*East Bridgewater, Mass.*
Frederic Howland Guild	*Providence*
Clifford Aylward Hahn	*Brooklyn, N. Y.*
Benjamin Malcolm Harris	*Bradford, N. H.*
James Eddy Harris	*Providence*
William Russell Harris	*Dedham, Mass.*
George Nathan Hazard	*Narragansett Pier*
Edwin Gustav Hempel	*Providence*
Arthur Henry Higgins	*Charleston, Me.*
Leon Clifford High	*Providence*
Edward Joseph Horrigan	*Providence*
Arthur Whitney Howe, Jr.	*Philadelphia, Pa.*
William Mason Howe	*Seekonk, Mass.*
Norman Bigelow Hull	*Brooklyn, N. Y.*
Abraham Samuel Isaacson	*Bristol*
Hyman Solomon Jeram	*Providence*
Francis Xavier Keresey	*West Stockbridge, Mass.*
Karl Henry Koopman	*Providence*
Oliver Moyer Kratz	*Philadelphia, Pa.*
Daniel Harrison Kulp	*Pottstown, Pa.*
William Dickson Lamond	*Providence*
Duncan Langdon	*Newburyport, Mass.*
Allan Lincoln Langley	*Newport*
Alfred Bunyan Lemon	*Manchester, N. H.*
Ira Lloyd Letts	*Moravia, N. Y.*
Leroy Everett Loxley	*Providence*
Abraham Luber	*Providence*
Joseph Anthony McCaull	*Providence*
Benjamin Murrie McLyman	*Newport*
Andrew Hamilton McPhail	*North Adams, Mass.*
Daniel Lawrence Mahoney	*Newton, Mass.*
Dennis Robert Mahoney	*Newton, Mass.*
Albert Pray Martin	*Pawtucket*
Frederick Stiles Martin	*Allentown, Pa.*
George Tucker Metcalf	*Wickford*
Walter Percy Misch	*Providence*
Edwin Francis Morgan	*Providence*
Carleton Doty Morse	*New Bedford, Mass.*
Harold Winthrop Munro	*Providence*

NAME	RESIDENCE
Edward Andrew Cushman Murphy	*Mount Sinai, N. Y.*
Hendrik Gabriel Nelson	*Providence*
Louis Israel Newman	*Providence*
Louis Oshman	*Kingsbridge, N. Y.*
Herbert Farwell Osteyee	*Ausable Forks, N. Y.*
Otto Carl Pahline	*East Providence*
Cecil Carlton Parker	*Hyde Park, N. Y.*
Ernest Arthur Parker	*Providence*
Sylvanus Henry Hill Parsons	*Albany, N. Y.*
Clarence Horace Philbrick	*Providence*
Jackson Cole Phillips	*Providence*
Clarence Ward Piper	*Rockland, Mass.*
William James Potter	*Providence*
James Henry Readio, Jr.	*Pawtucket*
Horace Ray Redington	*Amherst, Ohio*
William Joseph Reed	*North Adams, Mass.*
Joseph Francis Reilly	*Brockton, Mass.*
Stephen John Repko	*New York, N. Y.*
Kenneth Stillman Rice	*Gloucester, Mass.*
Charles Herbert Ricker	*Providence*
Thomas Howarth Roberts	*Providence*
Benjamin Israel Robinson	*Providence*
Richard Dodson Robinson	*Joppa, Md.*
Herbert Duncan Rollason	*Providence*
Herbert Mortimer Rosenberg	*New York, N. Y.*
John Evans Rouse	*Denver, Col.*
Raymond Booth Scranton	*Shelton, Ct.*
Thomas Clark Shedd	*East Providence*
Marshall Kingston Sheldon	*Pawtucket*
Carleton Fenner Sims	*Warwick Neck*
Howard Merrick Smith, Jr.	*Lakewood*
Leonard Walter Smith	*Pawtucket*
Walter Henry Snell	*Brockton, Mass.*
Charles Raymond Somers	*Mansfield, Mass.*
Earl Prentice Spalding	*Providence*
Charles Fred Spinning	*Newport*
John Kent Starkweather	*Denver, Col.*
Clifford John Stevens	*Brooks, Me.*
William Matthew Sullivan	*Fall River, Mass.*
Reynolds Sweetland	*Providence*
Norman Stephen Taber	*Providence*
Louis Clifford Taylor, Jr.	*Trenton, N. J.*
Lemuel Halsted Thompson	*Morristown, N. J.*

NAME	RESIDENCE
Robert Stanley Thomson	*Pawtucket*
Charles Howard Torrey	*Abington, Mass.*
Earl Whalley Tucker	*Allentown*
Payson Waite Tucker	*Narragansett Pier*
Charles Waterman Walker	*Meshanticut*
John Tempest Walker, Jr.	*Providence*
Albert Joseph Wallace	*Chicago, Ill.*
Edward Strawn Walton	*Youngstown, Ohio*
Elisha Carpenter Wattles	*Dorchester, Mass.*
Winter Arnold White	*Groton, Ct.*
Willis Carey Wilber	*Buffalo, N. Y.*
Frederick Henry Wilke	*Morristown, N. J.*
Frederick Crawford Williams	*Pawtucket*
Howell Ormsbee Wilson	*Morenci, Mich.*
James Taylor Wilson	*Youngstown, Ohio*
Horace Whipple Woodberry, Jr.	*Beverly, Mass.*
Edmund Nugent Woodsum	*Worcester, Mass.*
Maynard Earle Wright	*Montpelier, Vt.*

FRESHMEN: CLASS OF 1914

Frank Reuben Abbott	*Providence*
Vintson Augustus Ackley	*Mystic, Ct.*
David Isaac Adelman	*Providence*
James Gelston Affleck, Jr.	*Yonkers, N. Y.*
William Calvin Andrews	*Middleboro, Mass.*
Charles Whipple Anthony	*West Barrington*
Hilding Herbert Aronson	*Proctor, Vt.*
Lewis Randall Ashton	*Lawrence, Mass.*
Dwight Austin	*Springville, N. Y.*
Leslie Edwards Babcock	*Saybrook, Ct.*
Charles Louis Bagnall	*North Attleboro, Mass.*
Lewis Barrington	*Washington, D.C.*
Arthur Elliot Bartlett	*Boston, Mass.*
Albert Edwin Beachen	*Pawtucket*
Stephen Sibley Bean	*Woburn, Mass.*
Henry Lyman Parsons Beckwith	*Providence*
Edward Wood Berriman	*Chicago, Ill.*
Charles Everett Blackway	*Fall River, Mass.*
Irving Thayer Boardman	*Providence*
Raymond Franklin Borden	*South Portsmouth*
Alfred Hugh Oliver Boudreau	*Providence*
Walter Eugene Boyd	*Manchester, N.H.*

NAME	RESIDENCE
Charles Edward Brady	*Providence*
Hunnewell Braman	*Brookline, Mass.*
Charles John Brennan	*East Providence*
Earl Kingsley Brown	*Providence*
Howard Adams Brown	*Brattleboro, Vt.*
Watson Frederick Buehler	*Newark, N. J.*
Elliot Towle Bugbee	*North Attleboro, Mass.*
Ray Lawrence Burnell	*Westbrook, Me.*
Walter Russell Burnham	*Central Falls*
Edward Raymond Campbell	*Putney, Vt.*
Lisle Wood Carter	*Ashburnham, Mass.*
Hubert Hayward Champney	*Taunton, Mass.*
William Albert Chappell	*Ashaway*
Malcolm Chesley	*Pittsfield, Mass.*
Robert Noel Christian	*Brooklyn, N. Y.*
Ernest Rexford Cleaveland	*Providence*
King Collins	*Auburn*
Austin Norcross Cook	*Providence*
Edwin Pulver Cook	*Moravia, N. Y.*
Frank Merrill Cram	*Lakeport, N. H.*
George Linsley Cristy	*Providence*
William Clinton Crolius, Jr.	*Denver, Col.*
Charles Woodworth Crowther	*Pawtucket*
James Lawrence Cummings	*Fall River, Mass.*
Charles Wesley Goddard Currier	*Newton, Mass.*
Harold Leavitt Cushing	*Seekonk, Mass.*
Zygmont John Czubak	*Providence*
Clarence Adelbert Davis	*East Killingly, Ct.*
Walter Deady, Jr.	*New York, N. Y.*
Donald Dike	*Melrose, Mass.*
Harry Edward Dow	*Lawrence, Mass.*
John Albert Droege, Jr.	*Providence*
Peter Francis Dugan	*Newburyport, Mass.*
Eugene Ross Dukette	*Plattsburg, N. Y.*
Arthur Dudley Durgin	*Hopedale, Mass.*
Frederick Willard Easton, Jr.	*Pawtucket*
Lester David Ehmke	*Silver Creek, N. Y.*
Edward Irving Everett	*Franklin, Mass.*
Joseph Hollister Farnham	*Providence*
Abraham Feitelberg	*Fall River, Mass.*
Philip William Ferguson	*Lyndon Centre, Vt.*
Chester Arthur Files	*White Rock, Me.*
Louis Matthew Fine	*Providence*

NAME	RESIDENCE
Carl Winfield Firebaugh	*New York, N. Y.*
Clayton Earlman Fisher	*Lyndonville, Vt.*
William Norman Fisher	*Gloucester, Mass.*
Herbert Elliott Foote	*Pawtucket*
Marion Kenneth Forward	*Greeley, Col.*
Silas William Foss	*Laconia, N. H.*
George Heaton Frohock	*Camden, Me.*
Raymond Bissett Gallant	*Exeter, N. H.*
James Vincent Giblin	*Fall River, Mass.*
Erling Ellsworth Glassey	*Exeter, N. H.*
George Sidney Goodspeed	*Oak Lawn*
James Henry Gormley	*Olneyville*
Jonathan Pyott Hadfield	*Fall River, Mass.*
Russell Wyman Hall	*Mansfield, Mass.*
Earl Whittemore Harrington	*Providence*
Frederick Rowland Hazard, Jr.	*Syracuse, N. Y.*
George Earl Hebner	*Le Roy, N. Y.*
Loring Spaulding Hemenway	*Providence*
Paul Palmer Henson	*Providence*
Albert Brandt Hildebrecht	*Trenton, N. J.*
Gilbert Williams Hodges	*Foxboro, Mass.*
Arnold Smith Hoffman	*Barrington*
Robert Stow Holding	*Lewiston, Me.*
Philip Jetter	*Providence*
Murray Lee Jones	*Black River Falls, Wis.*
Thomas Leo Keily	*Providence*
Arthur Edward Kenyon	*Providence*
Irving Angell King	*Providence*
Wilder Malcolm Lahy	*New York, N. Y.*
Jean Martial Legris	*Arctic*
Robert Mendon Lord	*Providence*
Fred Lynn Loucks	*Le Roy, N. Y.*
Ralph Baker Low	*Essex, Mass.*
William James Lowrie	*Brooklyn, N. Y.*
Brown McDonald	*Sycamore, W. Va.*
Elmer George MacDowell	*Linwood, N. Y.*
Frank Edward McDuff	*Pawtucket*
James Joseph McGovern	*Providence*
Raymond C. McKay	*Youngstown, Ohio*
Edward Aloysius McLaughlin	*Providence*
Samuel Maker	*Providence*
Isidor Marcus	*Providence*
Kenneth Oliver Mason	*Pawtucket*

NAME	RESIDENCE
Melville Carlos Mason	*Rupert, Vt.*
Percy Davol Meader	*Providence*
Herbert Earl Morgan Medbury	*Providence*
John Tucker Metcalf	*Wickford*
William Anthony Moffett	*Schenectady, N.Y.*
Henry Avery Morgan	*Niagara Falls, N.Y.*
Nahum Morrill	*Chicago, Ill.*
Halsey Reginald Nash	*South Weymouth, Mass.*
Ernest Leon Neal	*Dover, N. H.*
William Baker Noyes	*Beaver Dam, Wis.*
Richard James O'Brien	*Springfield, Mass.*
Arthur Ingold Ossberg	*New York, N.Y.*
Edmund Selinger Parsons	*Providence*
John Paton	*Lincoln*
Stephen Jefferson Patten	*Brooklyn, N.Y.*
Constant Yale Peck	*Bristol, Ct.*
Howard Randolph Perrin	*Pawtucket*
Wilber John Phillips	*Youngstown, Ohio*
Reginald Poland	*Providence*
Raymond Abner Preston	*Danielson, Ct.*
Woodbury Freeman Pride	*Auburn, Me.*
Albert Weber Protheroe	*Port Chester, N.Y.*
Lewis Barron Pusey	*Washington, D.C.*
Alfred Ernest Raia	*Providence*
Hiram Randall	*Morganville, N.Y.*
Arthur Forest Ranger	*Providence*
Holden Remington	*New Bedford, Mass.*
Clarence Newton Reynolds, Jr.	*Pawtucket*
Henry Philip Reynolds	*Uxbridge, Mass.*
Harold Alton Rice	*Leominster, Mass.*
James Everett Ricker	*Providence*
Morgan Witter Rogers	*Providence*
George Emil Ronne	*Providence*
Stanley James Rowland	*Shelburne Falls, Mass.*
Harry John Rubin	*Providence*
Leon Beckwith Savacool	*Manchester, N. H.*
Melvin Eugene Sawin	*Providence*
James Ira Shepard	*Providence*
Isidor Shogam	*Fall River, Mass.*
Cyril Carpenter Smith	*Seekonk, Mass.*
Henry Robert Smith	*Rutland, Mass.*
Himan Smith	*Worcester, Mass.*
Raymond Leonard Smith	*Newark, N.J.*

NAME	RESIDENCE
Lyman Jacklin Spalding	*New York, N. Y.*
John Lovell Sperry	*Oak Lawn*
Lucius Baldwin Spicer	*Groton, Ct.*
Leroy Arnold Spooner	*Eden Park*
Harold Hardy Sprague	*Melrose, Mass.*
Walter Hoff Sprague	*Pottersville, Mass.*
Henry Stanley Stanton	*New York, N. Y.*
Carl Henry Taylor	*Hyde Park, Mass.*
William Francis Tewhill	*Florence, Mass.*
Harold Edgar Thomas	*Cranston*
Spencer Albert Townsend	*Le Roy, N. Y.*
James Joseph Tyrrell	*Pawtucket*
Lorenzo Joseph Vaudreuil	*Worcester, Mass.*
Eli Morril Viner	*Providence*
Cyril Horace Wakefield	*Providence*
Earl Hammond Walker	*Providence*
Ferdinand Jones Ward, Jr.	*Leicester, Mass.*
Walter Watson	*Terra Alta, W. Va.*
Ward Wetmore	*Essex, Mass.*
George Bertram Whitmarsh	*Providence*
Theodore Peters Whittemore	*West Roxbury, Mass.*
Ralph Kirk Wilbur	*North Dartmouth, Mass.*
Roger Williams	*Providence*
Grafton Lee Wilson	*Cambridge, Mass.*
Maurice Augustus Wolf	*Rochester, N.Y.*
Charles Lester Woolley	*Providence*
Harold Rollin Worsley	*Providence*
Sidney Waddington Wray	*Providence*
Nathan Manchester Wright, Jr.	*Providence*

SPECIAL STUDENTS

George Augustus Adams	*Bradford, Mass.*
Stanley Mirick Banfield	*Worcester, Mass.*
Joseph Banigan	*Providence*
Richard Davis Banigan	*Providence*
Zue Sun Bien	*Shanghai, China*
Lionel Moise Bishop	*Denver, Col.*
Henry Dewees Cady	*Warren*
George Washington Greene Carpenter	*Manton*
Antonio Colas, Jr.	*Havana, Cuba*
Charles Michael Corcoran	*Providence*
Morton Fletcher Frost	*Rumford*

NAME	RESIDENCE
Rod Allan Gillis	*Providence*
Frederick Richmond Gleason	*Brooklyn, N. Y.*
Russell Elliott Goff	*Providence*
Chester Brown Hadley	*Providence*
George Rogers Hill	*Brockton, Mass.*
Charles Augustus Leonard	*Hingham, Mass.*
Leon Norman McKenzie	*Pawtucket*
Carlos Martinez	*Muyeres, Mexico*
Charles Clarence Maxson	*Westerly*
Francis Everett Miles	*Cambridge, Mass.*
Isaac Dwight Miner	*East Greenwich*
Frederick William Pollitt	*Paterson, N. J.*
John William Regan	*Fall River, Mass.*
Louis Frederic Robbins	*Ballston Spa, N. Y.*
Harry George Seidel	*Fitchburg, Mass.*
Henry Rockwell Shaffer	*South Scituate*
Yuengfong Ralph Sun	*Shanghai, China*
Robert McDonald Sterling Walker	*Providence*
Herman Oscar Werner	*Providence*
Harry Ruby Westcott	*Providence*
William Valentine Winslow	*Fall River, Mass.*
Clarence Eugene Woodward	*Cortland, N. Y.*

THE WOMEN'S COLLEGE
IN BROWN UNIVERSITY

. . .

OFFICERS OF ADMINISTRATION AND INSTRUCTION

WILLIAM HERBERT PERRY FAUNCE, D.D., LL.D., PRESIDENT
Professor of Moral and Intellectual Philosophy

LIDA SHAW KING, A.M., DEAN OF THE WOMEN'S COLLEGE
Professor of Classical Literature and Archaeology

EMMA BRADFORD STANTON, A.M., REGISTRAR OF THE WOMEN'S COLLEGE

JOHN HOWARD APPLETON, A.M., Sc.D.
Newport-Rogers Professor of Chemistry

WILLIAM CAREY POLAND, A.M., LITT.D.
Professor of the History of Art and Director of the Museum of Fine Arts

NATHANIEL FRENCH DAVIS, A.M., LL.D.
Professor of Pure Mathematics

WINSLOW UPTON, A.M., Sc.D.
Professor of Astronomy, Director of the Ladd Observatory

ALBERT GRANGER HARKNESS, A.M., LITT.D.
Professor of Roman Literature and History

HENRY BRAYTON GARDNER, PH.D.
Professor of Political Economy

COURTNEY LANGDON, A.B.
Professor of the Romance Languages and Literatures

WILFRED HAROLD MUNRO, A.M., L.H.D.
Professor of European History

EDMUND BURKE DELABARRE, PH.D.
Professor of Psychology

JAMES IRVING MANATT, PH.D., LL.D.
Professor of Greek Literature and History

WALTER COCHRANE BRONSON, A.M., LITT.D.
Professor of English Literature

WALTER GOODNOW EVERETT, PH.D.
Professor of Philosophy and Natural Theology

ASA CLINTON CROWELL, PH.D.
Associate Professor of the Germanic Languages and Literatures

CARL BARUS, PH.D., LL.D.
Hazard Professor of Physics

*FRANCIS GREENLEAF ALLINSON, PH.D.
David Benedict Professor of Classical Philology

HENRY PARKER MANNING, PH.D.
Associate Professor of Pure Mathematics

†JAMES QUAYLE DEALEY, PH.D.
Professor of Social and Political Science

WALTER BALLOU JACOBS, A.M.
Professor of the Theory and Practice of Education

ALBERT DAVIS MEAD, PH.D.
Professor of Biology

ALBERT KNIGHT POTTER, A.M.
Associate Professor of the English Language

ALBERT BUSHNELL JOHNSON, A.M.
Associate Professor of the Romance Languages

ALEXANDER MEIKLEJOHN, PH.D.
Professor of Logic and Metaphysics

JOHN FRANCIS GREENE, A.M.
Assistant Professor of Roman Literature and History

WILLIAM MACDONALD, PH.D., LL.D.
George L. Littlefield Professor of American History

JOHN EMERY BUCHER, PH.D.
Associate Professor of Organic Chemistry

HENRY THATCHER FOWLER, PH.D.
Professor of Biblical Literature and History

LINDSAY TODD DAMON, A.B.
Professor of Rhetoric and English Literature

GEORGE WYLLYS BENEDICT, PH.D.
Associate Professor of English

THOMAS CROSBY, A.M.
Associate Professor of English and Public Speaking

HENRY BARRETT HUNTINGTON, A.B.
Associate Professor of English

JAMES FRANKLIN COLLINS, PH.B.
Assistant Professor of Botany and Curator of the Herbarium

* On leave of absence during the academic year 1910–11.
† On leave of absence during the first term of the academic year 1910–11.

CAMILLO VON KLENZE, PH.D.
Professor of the Germanic Languages and Literatures

HERBERT EUGENE WALTER, PH.D.
Assistant Professor of Biology

WILLIAM KIRK, PH.D.
Associate Professor of Social and Political Science

ROLAND GEORGE DWIGHT RICHARDSON, PH.D.
Assistant Professor of Pure Mathematics

JAMES MARION MOTLEY, PH.D.
Associate Professor of Economics

ERNEST TROWBRIDGE PAINE, A.M.
Acting Assistant Professor of Greek

ROBERT HORACE BAKER, PH.D.
Acting Assistant Professor of Astronomy

HAMILTON CRAWFORD MACDOUGALL, MUS.D.
Lecturer in Music

CHARLES HERMAN HUNKINS, A.B.
Instructor in French

ALICE WILSON WILCOX, A.M.
Instructor in Physiology and Household Economics in the Women's College

WILLIAM THOMSON HASTINGS, A.M.
Instructor in English

ROBERT McBURNEY MITCHELL, A.B.
Instructor in German

STANLEY BATES HARKNESS, A.B.
Instructor in English

ARTHUR UPHAM POPE, A.M.
Instructor in Philosophy

GILBERT CHINARD, B. ès L., L. ès L.
Instructor in French

JOHN HERBERT BACHMANN, A.M.
Instructor in German

NORMAN EDWARD HOLT, A.B.
Instructor in Chemistry

LAURENCE RICH GROSE, A.M.
Assistant in English

HERMAN ADOLF LIEBIG, A.B.
Assistant in German

ELIZABETH HICKSON
Assistant in Biology

JEANNIE OLIVER ARNOLD, M.D.
Medical Examiner

HELEN WILBUR PAINE
Instructor in Physical Training

SARAH GRIDLEY ROSS, A.B.
Hall Mistress, Miller Hall

CLARA IRENE PERRY
Librarian

COMMITTEE ON THE CURRICULUM

Professors Poland, Davis, Gardner, Langdon, Bronson, Everett, Allinson, Mead, *and* MacDonald, *Dean* King.

EXECUTIVE COMMITTEE

President Faunce, *Dean* King, Robert Hale Ives Goddard, *Rev.* Henry Melville King, Stephen Olney Metcalf.

ADVISORY COUNCIL

Miss Sarah E. Doyle, *Miss* Amelia S. Knight, *Mrs.* Gustav Radeke, *Mrs.* Carl Barus, *Mrs.* Francis G. Allinson, *Miss* Martha W. Watt, *Mrs.* William T. Hastings.

COURSES OF INSTRUCTION

OFFERED IN 1910–11

*COURSES designated by a † are given at the University; women are admitted to them, but only on the recommendation of the Dean of the Women's College. Women may also be admitted to other University courses not announced here, with the special permission of the department and with the consent of the Dean of the Women's College. In courses designated by a * a final mark covering the work of the course as a whole is given at the end of the course, the marks given at the end of the preceding term or terms being regarded as temporary.*

With the exception of Biology 20 and 22, Greek Literature and History 36, and Roman Literature and History 5 and 34, courses offered to women are identical with corresponding courses offered to men. Detailed information may be found on pages 88–158. The officers of instruction are those conducting courses for men also, with the addition of:

LIDA SHAW KING, A.M., *Professor of Classical Literature and Archaeology*

ALICE WILSON WILCOX, A.M., *Instructor in Biology*

ART

1, 2, 3. *History of Art from Antiquity through the Renaissance*
Professor POLAND.
Tu., Wed., Sat., at 9.25.

[4, 5. *Modern Art*]
Not offered in 1910–11.

[6. *Theory and Criticism of the Fine Arts*]
Not offered in 1910–11.

10. *Freehand Drawing*
Rhode Island School of Design.
Tu., or Th., or Fri., at 2.20.

11. *Practical Work in Art*
Rhode Island School of Design.
Tu., Th., Fri., at 2.20.

13. *Architectural Design*
Rhode Island School of Design.
Th. at 3.20.

ASTRONOMY

1, 2, 3. *General Course*
Professor BAKER.
Wed., Fri., Sat., at 11.25.

13, 14, 15.† *Advanced Astronomy*

BIBLICAL LITERATURE AND HISTORY

1.† *Elementary Hebrew*

[7, 8, 9.† *Gospels and Epistles*]
Not offered in 1910–11.

10, 11, 12.† *Acts and Pauline Epistles*

[14, 19, 20.† *New Testament Literature and History*]
Not offered in 1910–11.

21, 22, 23. *The English Bible as Literature*
Professor FOWLER.
Tu., Wed., Sat., at 9.25.

15.*† *Biblical Seminary*

BIOLOGY

2.† *Comparative Anatomy of Vertebrates*

3.† *Bacteriology*

4, 5.† *Advanced Histology and Pathology*

7.† *Chemical Physiology*

8.† *Physical Physiology*

9.† *Anatomy of the Nervous System*

10.† *Embryology and Histology*

12.† *Advanced Bacteriology*

18. *Ornithology*
Professor WALTER.

19.† *Entomology*

30.† *Protozoölogy*

33.† *Clinical Analysis*

[34.† *Comparative Anatomy of Invertebrates*]
Not offered in 1910–11.

20. *Euthenics*

Aims to teach the scientific facts and physiological and economic principles upon which right living depends. First term, the chemistry of foods and their physiological and economic value; food constituents, proteids, carbohydrates, fats, etc.; digestion and absorption; quantitative analysis of milk; selection and preparation of food; study of dietaries. Second term, the principles of general physiology and their application to personal hygiene; circulation, respiration, excretion, and reproduction; muscular and nervous action under varying conditions of stimulation, temperature, fatigue, etc. Third term, the principles of construction and practical management of the home necessary for the economy, health, and social efficiency of the individual occupants; demonstration of sanitary methods. Those who desire may substitute for the first term of this course the first term of 22. *Miss* WILCOX, *assisted by Miss* HICKSON.

Three hours. Six hours of attendance. Through the year. Elective for undergraduates. *Mon., Wed., Th., 10.25 to 12.15.*

22. *General Biology*

Introductory to other courses in the department; also designed for those who, without intending to pursue the subject further, desire a general view of biological work and biological theories, as variation, natural selection, evolution, and heredity. First term, practice in dissection; study of the structure and functions of the different organs of a typical mammal and comparison with those of man. Second and third terms, use of compound microscope, study of the

cell, protoplasm, tissues ; metabolism, growth and reproduction in unicellular animals and plants ; theories of fermentation, infection, vaccination, and immunity ; more specialized forms, hydra, fern, annelid, lobster, and frog. Collecting trips in the spring. Those who desire may substitute for the second and third terms of this course the second and third terms of 20. After the first term Botany 1 and Biology 22 are identical and the classes are combined. *Miss* Wilcox, *assisted by Miss* Hickson.

Three hours. Six hours of attendance. Through the year. Elective for undergraduates. *Tu., Wed., Sat., 9.25 to 11.15.*

BOTANY

1. *Introductory Course*

Professor Collins.

Tu., Wed., Sat., at 9.25.

3, 4, 5.† *Comparative Morphology*

6.*† *Special Course*

CHEMISTRY

1, 2, 3, *Descriptive Chemistry*

Professor Bucher *and Mr.* Holt.

Tu., Th., Sat., at 12.25.

4, 5.† *Qualitative Analysis*

6.† *Quantitative Analysis*

7, 8, 9.† *Quantitative Analysis, advanced course*

10, 11, 12.† *Organic Chemistry*

13.† *Assaying*

14.† *Organic Dyes*

[18, 19, 20.† *Physical Chemistry*]

Not offered in 1910–11.

23.† *Inorganic Chemistry, advanced course*

24, 25, 26.† *Organic Preparations, advanced course*

27, 28, 29.† *Inorganic Preparations, advanced course*

33, 34, 35.† *Conference on Special Topics in Chemistry*

36, 37, 38.† *Conference on Special Topics in Chemistry*

ECONOMICS

1. *Economics, elementary*
Professor MOTLEY.
First term. *Tu., Th., Sat., at 12.25.*

[3.† *Money and Banking*]
Not offered in 1910–11.

4.† *Public Finance*

5.† *History and Present Tendencies of Economics*

12, 6, 7. *Industrial Life, The Labor Movement, Socialism*
Professor MOTLEY.
Mon., Th., Fri., at 9.25.

9.† *The Tariff*

[10, 11, 12.† *Industrial History*]
Not offered in 1910–11.

13.† *Economic and Commercial Geography*

20, 21, 22.† *Investigation of Special Topics*

EDUCATION

Professor JACOBS

1. *History of Education*
First term. *Mon., Wed., Th., at 10.25.*

2. *Critical Study of Modern Education*
Second term. *Mon., Wed., Th., at 10.25.*

3. *Fundamental Principles of Education*
Third term. *Mon., Wed., Th., at 10.25.*

4. *Psychology of Education*
First term. *Mon., Th., Fri., at 9.25.*

5. *Hygiene of Education*
Second term. *Mon., Th., Fri., at 9.25.*

6. *Practical Introduction to Teaching*
Third term. *Mon., Wed., Th., at 9.25.*

ENGLISH

1. *Rhetoric and Composition*
Messrs. Hastings, Harkness, *and* Grose.
Wed., Fri., Sat., at 11.25.

[3.* *English Composition, advanced course*]
Not offered in 1910–11.

4.* *Argumentative Composition*
Professor Huntington.
Mon., Th., Fri., at 9.25.

7. *Public Speaking*
Professor Crosby.
Tu., Fri., Sat., at 10.25.

9.† *Old English*

10.† *Chaucer*

11. *English Literature from the Beginning to the Present Time*
Professor Bronson, *assisted by Mr.* Harkness.
Wed., Fri., Sat., at 11.25.

[13. *History of the Drama in England*]
Not offered in 1910–11.

[18. *The Modern English Drama*]
Not offered in 1910–11.

[14. *Shakspere*]
Not offered in 1910–11.

[15. *Shakspere*]
Not offered in 1910–11.

16.† *English Literature exclusive of the Drama, from 1600 to 1660*

17. *English Literature from 1660 to 1798*
Professor DAMON.
Mon. Tu., Th., at 2.25.

19. *English Literature from 1798 to 1832*
Professor BENEDICT.
Tu., Fri., Sat., at 10.25.

[20. *English Literature from 1832 to 1892*]
Not offered in 1910–11.

[22. *American Literature*]
Not offered in 1910–11.

23.† *Seminary in English Literature*

GEOLOGY

3.† *General Geology*

[6.† *Dynamical and Structural Geology*]
Not offered in 1910–11.

12.† *Economic and Commercial Geography*

13.† *Geographic Seminary*

GERMANIC LANGUAGES AND LITERATURES

1. *Introductory Course*
Mr. BACHMANN.
Mon., Wed., Fri., at 12.25.

2. *Intermediate Course*
Mr. LIEBIG.
Mon., Wed., Fri., at 12.25.

3, 4, 5. *Reading Course*
Professor CROWELL.
Mon., Tu., Th., at 11.25.

6.† *Modern Prose*

7. *Advanced Course in Standard Authors, Classical and Modern*
Mr. MITCHELL.
Mon., Wed., Fri., at 12.25.

[23, 24, 25.† *German Lyrical Poetry*]
Not offered in 1910–11.

29, 30, 31. *The German Drama of the Nineteenth Century*
Professor VON KLENZE.
Tu., Wed., Sat., at 9.25.

32.† *Lessing and Schiller*

[10. *Goethe's Faust: Parts 1 and 2*]
Not offered in 1910–11.

[33, 34, 35.† *Goethe: A Study of His Life and Works*]
Not offered in 1910–11.

[12, 13, 14.† *Outline History of German Literature*]
Not offered in 1910–11.

37, 38, 39.† *German Literature in the Nineteenth Century*

[17.† *Germanic Mythology*]
Not offered in 1910–11.

[20.† *Old Norse*]
Not offered in 1910–11.

[15.† *Middle High German*]
Not offered in 1910–11.

36.† *Seminary in German Literature*

GREEK LITERATURE AND HISTORY

A, B, C. *Elementary Course*
Professors MANATT *and* PAINE.
Mon., Wed., Fri., at 12.25.

3. *Lysias*
Professor PAINE.
First term. *Tu., Fri., Sat., at 10.25.*

1. *Plato*
Professor PAINE.
Second term. *Tu., Fri., Sat., at 10.25*

2. *Homer*
Professor MANATT.
Third term. *Tu., Fri., Sat., at 10.25.*

[4. *Lucian*]
Not offered in 1910–11.

[35. *Greek Historians*]
Not offered in 1910–11.

[6. *Dramatic Poets*]
Not offered in 1910–11.

[8. *Homer*]
Not offered in 1910–11.

[9. *Theocritus and Herondas*]
Not offered in 1910–11.

[7. *Plato and Aeschylus*]
Not offered in 1910–11.

[10. *The Drama*]
Not offered in 1910–11.

11. *Herodotus*
Professor MANATT.
First term. *Mon., Wed., Fri., at 12.25.*

12. *Thucydides*
Professor MANATT.
Second term. *Mon., Wed., Fri., at 12.25.*

[13. *Lucian*]
Not offered in 1910–11.

[14. *Aeschines and Demosthenes*]
Not offered in 1910–11.

15. *Pindar*
Professor MANATT.
Third term. *Mon., Wed., Fri., at 12.25.*

23, 24, 25.† *Greek Seminary*

33. *Greek Life*
Professors MANATT *and* PAINE.

[34. *Greek Literature*]
Not offered in 1910–11.

36. *Introduction to Greek Archaeology*
Outline of the remains of the earliest Greek civilization; an introductory study of Greek vases, coins, small bronzes, and terra-cotta figurines. Intended to give a general survey of these sources for Greek history and life. Illustrated lectures; collateral reading. *Professor* KING.
Three hours. Third term. Elective for students who have credit for one course in Latin or Greek. *Mon., Th., Fri., at 9.25.*

HISTORY

1. *Medieval and Modern History of Europe*
Professor MACDONALD.
Mon., Tu., Th., at 11.25.

[2, 3, 6. *Spanish History, Islam and the Crusades, The French Revolution*]
Not offered in 1910–11.

[4, 5, 7. *Period of the Renaissance, Period of the Reformation, European History since 1815*]
Not offered in 1910–11.

[8, 9, 10. *English Constitutional and Political History to 1689*]
Not offered in 1910-11.

11, 12, 13. *English Constitutional and Political History since 1689*
Professor MUNRO.
Mon., Tu., Th., at 11.25.

[19, 20, 21. *Constitutional and Political History of the United States*]
Not offered in 1910–11.

22, 23, 24.† *Seminary in American History*

27, 28, 29. *American History*
Professor MACDONALD.
Tu., Fri., Sat., at 10.25.

INDO-EUROPEAN PHILOLOGY

[1. *General Introduction to the Study of Language*]
Not offered in 1910–11.

MATHEMATICS

3. *Algebra*
Professors MANNING *and* RICHARDSON.
First term. *Mon., Tu., Th., Fri., at 2.25.*

1. *Solid and Spherical Geometry*
Professors MANNING *and* RICHARDSON.
Second term. *Mon., Tu., Th., Fri., at 2.25.*

2. *Trigonometry*
Professors MANNING *and* RICHARDSON.
Third term. *Mon., Tu., Th., Fri., at 2.25.*

4. *Analytic Geometry*
Professor DAVIS.
First and second terms. *Mon., Tu., Th., at 3.25.*

5. *Differential and Integral Calculus*
Professor DAVIS.
Third term. *Mon., Tu., Th., at 3.25.*

6, 7, 8.† *Differential and Integral Calculus*

9, 10, 11.† *Differential Equations*

21.† *Integral Calculus*

[22.† *Theory of Functions*]
Not offered in 1910–11.

[24.† *Advanced Algebra*]
Not offered in 1910–11.

27.† *Projective Geometry*

28.† *Function Theory of a Real Variable*

PHILOSOPHY

1. *Logic*
Professor MEIKLEJOHN *and Mr.* POPE.
Mon., Tu., Th., at 11.25.

2. *Psychology, introductory course*
Professor DELABARRE.
Tu., Th., Sat., at 12.25.

3.† *Psychology, advanced course*

4.† *Experimental Psychology, introductory laboratory course*

5.† *Experimental Psychology, advanced laboratory course*

[6, 7, 8. *History of Philosophy*]
Not offered in 1910–11.

9, 10. *Theoretical Ethics*
Professor EVERETT.
First and second terms. *Mon., Wed., Th., at 10.25.*

12. *Philosophy of Religion*
Professor EVERETT.
Third term. *Mon., Wed., Th., at 10.25.*

[16.† *Kantian and Post-Kantian Philosophy*]
Not offered in 1910–11.

17.† *Metaphysics*

PHYSICS

1, 2, 3. *Elementary Physics*
Professor BARUS.
Mon., Tu., Th., at 11.25.

4, 5, 6.† *Elementary Physics, continued*

7.† *Physical Measurements*

14, 15, 16.† *Advanced Laboratory Course*

17, 18, 19.† *Applied Harmonic Analysis and Applied Vector Analysis.*

20, 21, 22.† *Physics, advanced course*

ROMAN LITERATURE AND HISTORY

1. *Livy*
Professor KING.
First term. *Mon., Th., Fri., at 9.25.*

2. *Cicero's Letters*
Professor GREENE.
Second term. *Mon., Th., Fri., at 9.25.*

3. *Tacitus' Germania and Agricola*
Professor GREENE.
Third term. *Mon., Th., Fri., at 9.25.*

4. *Horace's Odes and Epodes*
Professor GREENE.
First term. *Mon., Th., Fri., at 9.25.*

[5. *Catullus, Tibullus, and Propertius*]
Not offered in 1910–11.

6. *Satires of Horace*
Professor HARKNESS.
Third term. *Mon., Th., Fri., at 9.25.*

[7, 8, 9. *Latin Poetry*]
Not offered in 1910–11.

10, 11, 12. *Latin Prose*
Professor HARKNESS.
Tu., Th., Sat., at 12.25.

22, 23, 24. *Latin Composition*
Professor PAINE.

28, 29. *Roman Life*
Professor GREENE.
Tu., Wed., Sat., at 9.25.

34. *Vergil*
Bucolics, with special reference to literary sources and influence; *Georgics,* and *Aeneid,* with special reference to the history of the times. *Professor* KING.
Three hours. Second term. Elective for Sophomores. *Mon., Th., Fri., at 9.25.*

[30. *Roman Literature*]
Not offered in 1910–11.

ROMANCE LANGUAGES AND LITERATURES

1. *Elementary Course*
Mr. CHINARD.
Mon., Wed., Th., at 10.25.

2, 3, 4. *Intermediate Course*
Mr. HUNKINS.
Mon., Wed., Th., at 10.25.

5, 6, 7. *French Language and Literature*
Professor JOHNSON.
Tu., Wed., Sat., at 9.25.

[8, 9, 10. *French Literature exclusive of the Drama, from 1800 to 1850*]
Not offered in 1910–11.

[11, 12, 13. *French Literature exclusive of the Drama, since 1850*]
Not offered in 1910–11.

20, 21, 22. † *French Literature exclusive of the Drama, from 1600 to 1800*

23, 24, 25. *The French Drama*
Professor LANGDON.
Tu., Wed., Sat., at 9.25.

26, 27, 28. † *Modern Italian*

35, 36, 37. *Dante in English*
Professor LANGDON.
Wed., Fri., Sat., at 11.25.

38, 39, 40. † *Modern Spanish*

41, 42, 43. † *Spanish Language and Literature*

SOCIAL AND POLITICAL SCIENCE

POLITICAL SCIENCE

1. *Political Science, elementary*
Professor DEALEY.
Second term. *Tu., Th., Sat., at 12.25.*

3, 4. † *American Government*

5. † *Comparative Study of Constitutions*

SOCIAL SCIENCE

1. *Social Science, elementary*
Professor DEALEY.
Third term. *Tu., Th., Sat., at 12.25.*

2. *Social Institutions, Conditions, and Problems*
Professor KIRK.
Wed., Fri., Sat., at 11.25.

3.† *Origin and Development of Society*

4.† *Social Philosophy*

5.† *Application of Sociological Principles*

20, 21, 22.† *Investigation of Special Topics*

MUSIC

1, 2, 3. *The Evolution of Modern Music*
Professor MACDOUGALL.
Mon., Th., at 11.25.

PHYSICAL TRAINING

Mrs. PAINE

From the close of the Thanksgiving recess to March 10, all first and second year students are required to attend gymnasium classes three times a week, as follows:

SOPHOMORE DIVISION: *Mon., Tu., Th., 2.30 to 3.15.*
FRESHMAN DIVISION: *Mon., Tu., Th., 3.25 to 4.10.*
A voluntary class for Juniors and Seniors will be held on *Fri. at 2.30.*

ORGANIZATION OF THE WOMEN'S COLLEGE‡

INSTRUCTION for undergraduate women § is provided by a department of the University known as THE WOMEN'S COLLEGE IN BROWN UNIVERSITY. The aim of the Women's College is to offer to all properly prepared women

‡Bulletins of the Women's College may be obtained from the Registrar, The Women's College in Brown University, Providence, R. I. For information not contained in this Catalogue or in the Bulletins, apply to the Dean of the Women's College.
§In the Graduate Department of Brown University all courses intended for graduate students are open to women on the same terms as to men.

the same examinations, the same courses of study under the same teachers, and the same degrees that the University offers to men, but to preserve the distinct social life of a separate college.

The Corporation of the University assumes supervision and control of the Women's College as of other departments of the University, and for this purpose appoints annually an Executive Committee of the Women's College. The Corporation receives gifts of money to found scholarships, fellowships, and professorships in Brown University for the benefit of its women students, and for the general purposes of the Women's College, and holds and administers such funds as separate and distinct from the general funds of the University. All gifts, legacies, and bequests for the Women's College, like those meant for any other department of the University, should be made payable to "Brown University, in Providence, in the State of Rhode Island and Providence Plantations," and designated for the use of the Women's College.

The President of the University is charged with the general direction, supervision, and government of this College as of other departments of the University. The immediate direction, supervision, and control devolve, subject to the direction of the President, on the Dean of the Women's College. An Advisory Council, appointed under the authority of the Corporation, advises with the President and the Dean upon matters relating to the Women's College, and makes recommendations to the Executive Committee of the Women's College or to the Corporation.

The Faculty of the Women's College is composed of the heads of all departments of instruction in Brown University, together with all professors and instructors who are actually teaching in the College.

The Women's College has a separate recitation hall, gymnasium, and dormitory, but uses the various libraries, laboratories, and museums of the University. For a description of these latter buildings, see pages 166–175. The grounds of the Women's College are an eighth of a mile from the University, with the main entrance at 172 Meeting Street. Pembroke Hall, the recitation building, contains the offices of the Dean and the Registrar, recitation rooms, a reading room and a library, a study, a chapel, and a lunch room. The Sayles Gymnasium contains the offices of the Instructor in Physical Training, a large hall with a gallery, a rest room, a study hall, and recitation rooms; the basement is fitted up with dressing rooms, bathrooms, lockers, needle and shower baths, and bowling alleys. The dormitory, Miller Hall, opened in 1910, is on the college campus. It contains a library, reception, dining, and sitting rooms, an apartment for the Hall Mistress, and rooms for forty-eight students.

REQUIREMENTS FOR ADMISSION

The requirements for admission to the Women's College are the same as those which the University prescribes for men. For information concerning admission by certificate or examination, and the times and places of examinations, see

pages 41, 42. Certificates and applications for permission to take examinations should be sent to the Registrar of the University. For the entrance requirements for the various degrees, admission to advanced standing, and admission of special students, see pages 43–69. Each applicant for registration as a special student must consult the Dean of the Women's College before registering.

REGISTRATION AND ENROLMENT

The regulations governing registration and enrolment are the same at the Women's College as at the University. (See page 70.) All students must apply for registration and enrolment at the office of the Registrar of the Women's College, in Pembroke Hall, between 9 a.m. and 12 m., or between 2 p.m. and 4 p.m., on the same days as at the University. Permission to change a previous registration must be obtained from the Dean, on the same days and at the same hours.

REQUIREMENTS FOR DEGREES

The requirements for the various degrees are explained on pages 72–85. Upon students of the Women's College who complete satisfactorily the work leading to the degree of Bachelor of Arts, Bachelor of Philosophy, or Bachelor of Science, the Board of Fellows of the University confers the appropriate degree. For the degrees conferred in 1910, see pages 202–204.

EXAMINATIONS

As a rule women take the same examinations as those offered to men, and at the same times and places. When a separate examination is necessary, the two examinations are made as nearly identical in character as possible. (See pages 86, 87.)

PHYSICAL TRAINING AND MEDICAL CARE

From the close of the Thanksgiving recess to the end of the second term three hours a week of physical training are required of first and second year students; for other students voluntary classes are held. All work, including outdoor work, is under the supervision of the instructor. At the beginning and at the close of the Freshman and Sophomore years, students are carefully examined both by the College Physician and by the Director of the Department. Early each fall the College Physician meets the new students in small groups to discuss physical conditions in college life. Any student, not living at home, may in case of illness visit or summon the College Physician; for this first call no fee is charged.

FEES

Students at the Women's College pay the tuition fee of $150 in two instalments: $75 upon registration in September and $75 upon registration in Jan-

uary. Freshmen pay a matriculation fee of $5 upon registering in September. No deduction in tuition is made on account of absence. Laboratory fees, etc., must be paid two weeks before the close of a term.

Special students at the Women's College are charged $10 a term for each course holding three recitations a week. Laboratory fees are in addition to this.

DORMITORY ACCOMMODATIONS

Miller Hall, the college dormitory, contains forty-eight single rooms, adequately furnished. The charge for room and board varies from $270 to $250 a year. Definite applications for rooms must be received by the Hall Mistress on or before May 1. The plan of the building and all other needed information is printed in a separate pamphlet, which may be obtained from Miss S. G. Ross, Hall Mistress, Miller Hall, 118 Cushing Street. Students who cannot secure rooms in Miller Hall are required to live in houses authorized by the College. A list of these may be obtained from the Hall Mistress.

LOAN FUNDS AND SCHOLARSHIPS

The College has a loan fund and various scholarships designed to aid deserving students. Aid is given only to students whose work is creditable, and is withdrawn if the recipients become deficient in scholarship or subject to college discipline. Applications should be made in writing to the Dean of the Women's College on or before May 1. Awards are made after July 1. A list of the funds and scholarships follows.

The Rhode Island Society for the Collegiate Education of Women has founded a Loan Fund from which students of the Women's College who have completed their first year may borrow small sums on easy terms. This fund is available only for students whose record for scholarship is satisfactory to the committee which administers the loans. Further information may be obtained from the Dean.

The Rhode Island Women's Club annually devotes the income of its Churchill Fund toward the payment of the tuition of some student in the Women's College, preferably the daughter of a member of the Club.

The College awards annually from its own funds scholarships of varying amounts, to students in need of financial aid. There are also the following endowed scholarships:

The Sarah E. Doyle Scholarship, of one thousand dollars, which bears the name of its founder; the income is applied toward the payment of the tuition of students in the Women's College who have been prepared for college in the Providence English High School.

The Sarah Sutton Scholarship, of one thousand dollars, founded by one of her daughters.

The Daniels Scholarship, of twenty-five hundred dollars; the income to be

used toward paying the expenses of one or more women pursuing studies either in the University or in the Women's College.

The Howard Scholarship, of one thousand dollars, presented by James Leland Howard.

The Thayer Scholarship, founded by Edward C. Thayer, in honor of his father, Joseph Thayer, of the class of 1815; the income to be for the education of any young man or woman a resident of Uxbridge, Mass., indorsed by the selectmen and superintendent of schools there, needing pecuniary aid, and giving promise by character and scholarship of a life of usefulness. If there is no applicant from Uxbridge, the income may go to any applicant from Massachusetts who fulfils the conditions.

The Maria Storrs Peck Scholarship, of one thousand dollars, presented by her sisters.

PRIZES, PREMIUMS, AND HONORS

The Gaspee Chapter Daughters of the American Revolution Prize. This prize of forty dollars is awarded annually to that student in the graduating class of the Women's College who shall present the best essay of recognized merit upon some topic in American history. The essays are to bear each an assumed name, and to be accompanied by an envelope marked with the assumed name and inclosing the candidate's real name and address. The essays must be handed to the Dean before May 1. The award is announced at Commencement. The subject for 1910–11 is: *The Burgoyne Campaign.*

The Chace Prize. The will of Mrs. Elizabeth D. Chace makes provision for a prize of twenty-five dollars, to be awarded to that student of the Women's College who shall present the best essay, of recognized merit, upon the Women's Suffrage Movement.

The Society of Colonial Dames Prize in American History. The income of a fund of fifteen hundred dollars, known as the Roger Williams Fund established by the National Society of Colonial Dames in the State of Rhode Island and Providence Plantations, given to the University in 1906, is awarded annually as a prize for the best essay on a subject in American colonial history. The competition is open to Juniors, Seniors, and Graduates, and to men and women on equal terms. Essays must show independent use of authorities, and should, in general, extend to at least four thousand words. Detailed regulations governing the competition are announced from year to year. The award is announced at Commencement. The subject for 1910–11 is: *The Stamp Act in Rhode Island.*

The Eli Thayer Scholarship of the Oreads, of three thousand dollars, founded by the Oread Collegiate Institute Association, in memory of the Hon. Eli Thayer, the founder of the Institute; the income to be for the

education of a deserving student in the Women's College, preferably a descendant of a former student of the Institute.

Additional Premiums. The students of the Women's College are entitled to compete in all examinations for premiums and prizes offered in Brown University. In case any woman is entitled to a first premium, competed for by examination, a prize, the amount of which is duly announced, is awarded by the Dean.

Final Honors are awarded by the University to women on the same conditions as to men. (See pages 200, 201.)

PRIZES AND PREMIUMS AWARDED IN 1910

The Gaspee Chapter Daughters of the American Revolution Prize, to
Agnes Marie Blain.

The Chace Prize to
Elizabeth Morrison.

The Society of Colonial Dames Prize to
Gertrude Hildreth Campbell.

The Foster Premium in Greek : a collateral first premium to
Caroline Millard Morton.

A collateral first premium in French to Mildred Elaine Cutler, instructed in the Pawtucket High School.

STUDENTS IN THE WOMEN'S COLLEGE

SENIORS: CLASS OF 1911

NAME	RESIDENCE
Lydia Harris Andrews	*Providence*
Lida May Bassett	*Plymouth, Mass.*
Irene Maude Bedell	*Livingston, N. J.*
Helen Newell Bell	*Bristol*
Bessie Edith Bloom	*Providence*
Ruth Constance Burroughs	*Pawtucket*
Florance Hoover Bushell	*Providence*
Gertrude Hildreth Campbell	*East Providence*
Anna Spencer Canada	*New Bedford, Mass.*
Edith Marie Linnéa Carlborg	*Providence*
Lyla Cameron Crapo	*Taunton, Mass.*
Emma Henrietta Dahlgren	*Attleboro, Mass.*
Arline Field	*Providence*
Stella Gerber	*Webster, Mass.*
Helen Melissa Harvey	*La Grange, Mo.*
Mildred Annie Hatch	*Riverside*
Clara Estelle Hefner	*Southbridge, Mass.*
Sadie Hewitt	*Attleboro, Mass.*
Alice Frances Hildreth	*Providence*
Mabel Irene Hinton	*Plainville, Mass.*
Alice Dudley Holman	*Taunton, Mass.*
Elizabeth Wilson Hughes	*Avalon, Pa.*
Edith Lauraette Knights	*Riverside*
Marion Bowler Lester	*Newport*
Catherine Virginia Golding Levere	*Bristol*
Mary Catherine McMahon	*Pawtucket*
Eva Waterman Magoon	*Providence*
Sallie Wolff Mielatz	*Saunderstown*
Jeannette Bell Moffitt	*Providence*
Irene Doré Nelson	*New York, N. Y.*
Hannah Senior Nicholson	*Pawtucket*
Nellie Blithe Nicholson	*Baltimore, Md.*
Catherine Frances Nulty	*Woonsocket*
Bertha Annie Payson	*Rockport, Me.*
Clara Irene Perry	*Providence*
Helen Spofford Pingree	*Auburn, Me.*
Jennie Fatima Robinson	*Brockton, Mass.*
Josephine Thomson Sackett	*Providence*

NAME	RESIDENCE
Clara Ailman Stanhope	*Newport*
Elizabeth Dexter Thacher	*Pawtucket*
Rebecca Samuel Watson	*Frankfort, Ky.*
Flora Ella Wilbur	*Natick*
Marjorie Phillips Wood	*Taunton, Mass.*

JUNIORS: CLASS OF 1912

Elsie Angelène Anderson	*East Bridgewater, Mass.*
Lottie Maria Angell	*South Swansea, Mass.*
Rose Mary Bancroft	*Glastonbury, Ct.*
Harriet Colburn Bennett	*Providence*
Mela Elsie Bennett	*Providence*
Mildred Catherine Bishop	*North Attleboro, Mass.*
Annie Phillips Borland	*Providence*
Elizabeth Johnston Brown	*Pawtucket*
Gertrude Morton Butler	*Mansfield, Mass.*
Elinor Margaret Caldwell	*Pawtucket*
Marion Frances Catlin	*West Somerville, Mass.*
Margaret Brooks Church	*Providence*
Margaret Griswold Collins	*Bridgeport, Ct.*
Gertrude Mary Conant	*Pawtucket*
Marion Jane Emsley	*North Scituate*
Minnie May Fogg	*Laconia, N. H.*
Irene Hawes	*Riverside*
Alice Hubbard	*Providence*
Beatrice Florence Kohlberg	*Providence*
Regina Theresa Loftus	*North Adams, Mass.*
Clare Edgarton Longley	*Worcester, Mass.*
Jessie Isabelle Monroe	*Providence*
Ida May Nichols	*Providence*
Annie Pickles	*Providence*
Ollie Annette Randall	*Providence*
Clarice Emily Ryther	*Providence*
Florence Binford Southwick	*Pawtucket*
Margaret Parkhurst Stevens	*Newport*
Marion Slater Stone	*Providence*
Mary Sweetland	*Providence*
Ann Eliza Thomas	*Providence*
Hazel Marguerite Valentine	*Westbrook, Me.*
Dorothy Charlotte Walter	*Lyndonville, Vt.*
Irene Warren	*New Haven, Ct.*

SOPHOMORES: CLASS OF 1913

NAME	RESIDENCE
Mary Elizabeth Barnicle	*Providence*
Jessie Helen Barr	*Providence*
Helen Irene Barrett	*Providence*
Marion Hortense Bayley	*Newburyport, Mass.*
Irene Mary Cecilia Belanger	*New Bedford, Mass.*
Violet Graham Bloomfield	*Central Falls*
Marilla Letitia Bogle	*Fall River, Mass.*
Mildred Ethel Bosworth	*Georgiaville*
Aline Bourgeois	*Newport*
Hilda Rowena Bronson	*Morgan Park, Ill.*
Rosalind Celestine Brooks	*Providence*
Anna Maria Browne	*Pawtucket*
Mildred Browning	*Pawtucket*
Susan Amanda Browning	*Westerly*
Gladys Chidley Bushell	*Providence*
Mary Fifield Clarke	*Centreville*
Edith Frances Coolidge	*Fall River, Mass.*
Lillian Lucy Davenport	*Pawtucket*
Vida Maud Dexter	*Providence*
Norah Eloise Dowell	*Greystone*
Cornelia Fill	*Springfield, Mass.*
Hazel Mellie Fowler	*Newburyport, Mass.*
Marion Bristow Greene	*Providence*
Helen Matilda Hastings	*Feeding Hills, Mass.*
Carlotta Effie Hemenway	*Providence*
Lucile Spencer Himes	*Phenix*
Sarah Ann Holt	*Pawtucket*
Theckla Jones	*Westerly*
Mary Madeleine Kane	*Pontiac*
Elva Marion Lake	*Fall River, Mass.*
Alice Victoria Lisk	*Hackensack, N. J.*
Barbara Littlefield	*Providence*
Marion Rawson Luther	*Providence*
Isabel McMurtry	*Providence*
Ottilie Rose Metzger	*Providence*
Annie Evelyn Ottley	*Wickford*
Gladys Paine	*Palmer, Mass.*
Winifred Augusta Palmer	*Cranston*
Bessie Gertrude Roche	*Thorndike, Mass.*
Ruth Elizabeth Ryther	*Providence*
Blanche Gertrude Snow	*Pawtucket*

NAME	RESIDENCE
Harriet Marguerite Stadtfeld	*Phenix*
Alice Eva Steere	*Hingham Centre, Mass.*
Minnie White Taylor	*Providence*
Evelyn Butler Tilden	*Peru, Vt.*
Hazelle Marie Underwood	*Providence*
Elizabeth Wave Whitman	*North Stonington, Ct.*
Catherine Slocum Williams	*Newport*
Dorothy Starr Wood	*Providence*

FRESHMEN: CLASS OF 1914

Helen Angell Andrews	*Grand Haven, Mich.*
Marguerite Appleton	*Providence*
Miriam Amy Banks	*Providence*
Marion Cheever Bates	*Providence*
Harriet Stanton Baxter	*Montello, Mass.*
Elizabeth Bodfish	*Palmer, Mass.*
Alita Dorothy Bosworth	*Providence*
Mary Lyon Bosworth	*Providence*
Dorris Snow Briggs	*Providence*
Helen Harriet Briggs	*Providence*
Laura Julia Brown	*Barrington*
Margaret Josephine Burdon	*Waterbury, Ct.*
Mildred Myrtle Chapman	*Providence*
Bessie Anne Clow	*East Wolfboro, N. H.*
Grace Amelia Cockroft	*New Hartford, Ct.*
Jane Wilson Cook	*Fall River, Mass.*
Ruth Elizabeth Cooke	*Providence*
Margaret Crooks	*Ravenswood, W. Va.*
Katherine Elizabeth Curry	*Providence*
Mildred Elaine Cutler	*Pawtucket*
Marion Frances Devine	*Woonsocket*
Blanche Douglas	*Moosup, Ct.*
Alice Beatrice Duckworth	*Pawtucket*
Mildred Morris Flagg	*Littleton, Mass.*
Anna Madeline Flaherty	*Valley Falls*
Helen Augusta Gilliland	*Norwood, Mass.*
Anna Ruth Goodchild	*Providence*
Margaret Ella Gordon	*Providence*
Mary Christina Grandfield	*Pawtucket*
Frances Violet Heltzen	*Providence*
Edith Edwina Holden	*East Providence*
Dorothy Palmer Hull	*Providence*
Sybil Marguerite Kemp	*Kingston, N. H.*

NAME	RESIDENCE
Elena Roxana Lovell	*East Providence*
Alice Inez McMeehan	*Rumford*
Marjorie Anita Mallory	*Providence*
Mary Tabor Manchester	*Tiverton*
Elizabeth Price Moulton	*Providence*
Mabel Irene Osborne	*Danville, N. H.*
Jenny Martha Palmer	*Cranston*
Winona Merle Perry	*Providence*
Helen Olivia Price	*Providence*
Maude Eunice Sears	*Providence*
Rowena Albro Sherman	*Providence*
Florence McGregor Simonds	*Franklin, Mass.*
Hope Sisson	*Providence*
Ruth Sisson	*Providence*
Stella Mary Smith	*Fall River, Mass.*
Marjorie Arnold Thayer	*Woonsocket*
Maud Tucker	*Providence*
Alice Mary Waddington	*Providence*
May Chaffee West	*Seekonk*
Della Edith Wood	*Providence*
Helen Humphry Wood	*Providence*
Aznive Sarah Yorganjian	*Providence*

SPECIAL STUDENTS

Esther Georgina Anderson	*Providence*
Bertha Helen Baker	*Brockton*
Grace Emeline Barstow	*Providence*
Mabel Ellinwood	*Providence*
Edna Rhodes Gardiner	*Providence*
Edith Gorham Harris	*Providence*
Leah Hyman Lasker	*Providence*
Ruth Long	*Denver, Col.*
Jessie Crum Meiklejohn	*Pawtucket*
Mary Richmond Manton Mitchell	*Providence*
Eunice Ruth Moore	*Providence*
Mildred Louise Mott	*Providence*
Frances Semle	*Providence*
Marion Rebecca Tiffany	*Providence*
Alice Evangeline Walter	*Providence*
Marjorie Adelle White	*Danforth, Me.*
Mary Williams	*Providence*
Elizabeth Upham Yates	*Providence*

APPENDIX

THE BROWN UNIVERSITY TEACHERS' BUREAU

THE Brown University Teachers' Bureau was established for the purpose of facilitating communication between the heads of educational institutions and graduates of Brown who desire positions as teachers. To this end it solicits correspondence with those who are seeking teachers, and invites inspection of the list of teachers now registered. It advises graduates of Brown who wish its assistance to register at once, and, if possible, to meet the Secretary in a personal interview. It offers to undergraduates information as to subjects in which there is a demand for teachers, as to positions commonly open to recent graduates, and as to the preparation usually required. No charge for the services of the Bureau is made either to students or to schools. It is the further purpose of the Bureau to foster coöperation between the University and all graduates engaged in the work of education. As far as possible an accurate register of the addresses and the positions of all such graduates is kept. The office of the Secretary, Professor Walter Ballou Jacobs, is in the Administration Building, Room 10.

THE BROWN UNIVERSITY BUREAU OF APPOINTMENTS

This Bureau has been established to assist former students of the University in securing other kinds of employment than those cared for by the Teachers' Bureau. It desires to obtain from friends of the University information in regard to positions available for college men. This information it will supply to those who may register with the Bureau. Blanks for this purpose may be obtained from the Secretary and no charge will be made for the services of the Bureau. The office of the Secretary, Professor Ansel Brooks, is in the Engineering Building, Room 15.

THE BROWN UNIVERSITY TEACHERS' ASSOCIATION

The Brown University Teachers' Association was organized in 1903. The purpose of the Association is "first, to further the mutual interests of Brown

University and the schools preparing students therefor; and second, to promote the welfare of the Alumni of the University who are teachers." The seventh annual meeting of the Association was held at Brown University on Friday and Saturday, April 22 and 23, 1910.

OFFICERS FOR 1910–11

President: Elmer Samuel Hosmer, A.M.
First Vice-President: Professor Albert Granger Harkness, Litt.D.
Second Vice-President: Everett Brownell Durfee, A.M.
Secretary: Professor Walter Ballou Jacobs, A.M.
Treasurer: Clarence Hartwell Manchester, A.M.
Executive Committee: The Officers of the Association and the President of the University, *ex officio;* Professor George Grafton Wilson, Ph.D., Emma Helena Gregory, A.M., John Shaw French, Ph.D.

THE RHODE ISLAND ALPHA OF THE PHI BETA KAPPA SOCIETY

OFFICERS AND COMMITTEES FOR 1910–11

President: Rev. William Henry Lyon, D.D.
Vice-President: Professor Albert Granger Harkness, Litt.D.
Secretary: Professor Otis Everett Randall, Ph.D.
Treasurer: Robert Perkins Brown, A.M.
Committee on Nominations: Professor Winslow Upton, Sc.D., Henry Frederic Lippitt, A.B., Charles Talbot Dorrance, A.B., Daniel Beckwith, A.B., Harold Crins Field, A.B.
Committee on Arrangements: Hon. Charles Carney Mumford, A.M., Professor Walter Goodnow Everett, Ph.D., Dr. George Thurston Spicer, A.M.
Auditing Committee: Walter James Towne, A.M., William Washburn Moss, A.M.
Committee on New Chapters: Professor Otis Everett Randall, Ph.D., Professor Walter Ballou Jacobs, A.M., Rev. Thomas Elliott Bartlett, A.B.

MEN ELECTED IN 1910

Seniors: Albert Arnold Bennett, Jr., Harold Stephen Bucklin, Louis Robinson Collins, Albert Farnsworth, Albert Potter Farwell, Frank Le Forrest Mansur, Warren Carney Norton, James Smalley, Jr.

Juniors: Edward Bartlett Allen, Edwin Carpenter Bosworth, Herbert Frederick Cawthorne, Philip Chadsey Curtis, Frederick Marshall Jencks, Thomas Henry Quigley, Morris Jacob Wessel, Ellis Laurie Yatman.

WOMEN ELECTED IN 1910

Seniors: Agnes Marie Blain, Florence Alice Crossley, Mary Clegg Suffa.

Juniors: Gertrude Hildreth Campbell, Marion Bowler Lester, Elizabeth Dexter Thacher.

THE BROWN CHAPTER OF THE SOCIETY OF THE SIGMA XI

Students who have taken at least seventy-eight term hours in pure or applied science are, in their Senior year, eligible to membership in the honorary scientific society, Sigma Xi, provided that they have "given promise of marked ability in those lines of work which it is the object of the Society to promote."

OFFICERS AND COMMITTEES FOR 1910-11

President: Professor Albert Davis Mead, Ph.D.
Vice-President: Professor Roland George Dwight Richardson, Ph.D.
Recording Secretary: Professor Charles Wilson Brown, A.M.
Corresponding Secretary: Professor Ansell Brooks, M.E.
Treasurer: Professor Arthur Horace Blanchard, C.E.
Auditor: Henry Bernardin Browne, C.E.
Councillor: Professor John Edward Hill, Sc.D.
Committee on Nominations: Professor Charles Wilson Brown, A.M., Professor Nathaniel French Davis, LL.D., Professor Albert Davis Mead, Ph.D., Professor Winslow Upton, Sc.D., Professor William Herbert Kenerson, M.E.

MEMBERS ELECTED IN 1910

Graduates: William Ward Browne, John Wymond Miller Bunker, Ada Irene Burton, Nelson Clark Dale, Florence Harris Danielson, Louis John Gillespie, Harold William Lyall, James Cook Martin, George Hathorn Smith, Walter Edward Sullivan, George Francis Sykes.

Seniors: Maxwell Barus, Albert Arnold Bennett, Jr., Albert Potter Farwell, James Alexander Hall, Norman Edward Holt, Roland Ellis Hutchins, Howard Alfred Taber, Mary Clegg Suffa.

THE ASSOCIATED ALUMNI

OFFICERS AND COMMITTEES FOR 1910-11

President: Samuel Hanson Ordway, A.M., '80, New York City.

Vice-Presidents: William Howard Sweetland, A.M., '78, Providence, George Grafton Wilson, Ph.D., '86, Cambridge, Mass.

Secretary: Albert Knight Potter, A.M., '86, Providence.

Treasurer: Robert Wendell Taft, Ph.B., '91, Providence.

Executive Committee: John Byron Diman, A.M., '85, Henry Allen Whitmarsh, M.D., '76, James Monroe Pendleton, A.M., '85, Isaac Bronson Burgess, A.M., '83, William Chace Greene, A.M., '75.

Advisory Board: Charles Carney Mumford, A.M., '81, George Fremont Bean, LL.B., '81, Edward Otis Stanley, A.M., '76, Albert Knight Potter, A.M., '86, *ex officio*, and representatives chosen by the Alumni Associations.

ALUMNI ASSOCIATIONS

Boston. *President*, Hon. Joseph Walker, '87. *First Vice-President*, Hon. Richard Olney, '56. *Treasurer*, Fred W. Woodcock, '91. *Secretary*, Rufus E. Corlew, '98, 29 Beacon Street, Boston, Mass.

Newport. *President*, Alan R. Wheeler, '01. *First Vice-President*, William R. Harvey, '01. *Second Vice-President*, William P. Buffum, '79. *Secretary and Treasurer*, Clarence A. Carr, '87, 209 Spring Street, Newport, R.I.

Woonsocket. *President*, Frank W. Senior, '97. *Vice-President*, Rev. Charles A. Denfield, '89. *Treasurer*, L. Herbert Ballou, '05. *Secretary*, Frederic E. Whitaker, Woonsocket, R.I.

Fall River. *President*, Hon. Andrew J. Jennings, '72. *Vice-President*, Frank E. Fash, '02. *Treasurer*, Guilford C. Hathaway, '99. *Secretary*, Harry Smalley, '04, 611 June St., Fall River, Mass.

Worcester County Sons of Brown. *President*, Appleton P. Williams, '89. *Vice-President*, John A. Clough, '99. *Secretary and Treasurer*, Winfred H. Whiting, '01, 626 Slater Building, Worcester, Mass.

Connecticut Valley. *President*, Arthur D. Call, '96. *Vice-President*, Luther White, '64. *Secretary and Treasurer*, Arthur S. Gaylord, '02, South Hadley Falls, Mass.

New Bedford. *President*, Allen F. Wood, '69. *First Vice-President*, Theodore B. Baylies, '95. *Second Vice-President*, Edward T. Tucker, '71. *Secretary and Treasurer*, Edward W. Holmes, '03, 661 County Street, New Bedford, Mass.

Washington and New London Counties. *President*, Henry R. Palmer, '90. *Secretary*, Charles I. Gates, '99, Westerly, R.I.

Bristol. *President*, Hon. Augustus O. Bourn, '55. *First Vice-President*, Rev. William R. Trotter, '80. *Second Vice-President*, Nathaniel G. Herreshoff, '96. *Treasurer*, James F. Lavander, '02. *Secretary*, Howard R. Newman, '08, 110 High Street, Bristol, R.I.

New Hampshire and Vermont. *President*, George I. Hopkins, '75. *Vice-President*, Reuben E. Walker, '75. *Treasurer*, Carroll S. King. *Secretary*, Dr. Henry W. N. Bennett, '97, Manchester, N. H.

New York City. *President*, John B. F. Herreshoff, '70. *Vice-President*, Edward O. Stanley, '76. *Treasurer*, Colgate Hoyt, Jr., '05. *Secretary*, Herbert B. Keen, '07, 2719 High Street, Camden, N. J.

Albany. *Honorary President*, William McDonald, '74. *President*, Clarence B. Lester, '00. *Vice-President*, Charles S. Aldrich, '94. *Treasurer*, Oscar F. Bellows, '95. *Secretary*, Charles S. Stedman, '96, 445 Broadway, Albany, N. Y.

Central New York. *President*, Frederick R. Hazard, '81. *Vice-President*, Jay S. Fox, '94. *Secretary and Treasurer*, Warren G. Bullard, '92, 613 South Crouse Avenue, Syracuse, N. Y.

Rochester. *President*, Clarence A. Barbour, '88. *Secretary and Treasurer*, Henry C. Peepels, '81, 188 Harvard Street, Rochester, N.Y.

Philadelphia. *President*, Richard M. Atwater, '65. *First Vice-President*, Edwin S. Thompson, '86. *Second Vice-President*, Rev. Frank A. Smith, '89. *Treasurer*, J. Benton Porter, '90. *Secretary*, Dr. W. H. Bennett, '79. *Assistant Secretary*, Pierson T. Fort, Ex. '95, 414 West Stafford Street, Germantown, Pa.

Pittsburgh. *President*, William E. Lincoln, '68. *Vice-President*, Charles H. Zug, '54. *Secretary and Treasurer*, Charles A. Powers, '02, Westinghouse Building, Pittsburgh, Pa.

Maryland and District of Columbia. *President*, Professor Herbert E. Day, '93. *Vice-President*, George B. McClellan, '97. *Secretary and Treasurer*, William A. Slade, '98, 310 Senate Office Building, Washington, D.C.

Cleveland. *President*, Frank P. Whitman, '74. *Vice-President*, Newton S. Calhoun, '79. *Secretary and Treasurer*, Charles J. Foskett, n. '96, 1658 Crawford Road, Cleveland, Ohio.

Cincinnati. *President*, Eliab W. Coy, '58. *Vice-President*, William H. Pabodie, '55. *Secretary*, Samuel W. Smith, '80, Madison Road, Cincinnati, Ohio.

Chicago. *President*, Gerald B. Smith, '91. *Vice-President*, Harry H. Mallory, '99. *Secretary and Treasurer*, Frank L. Morse, '86, 6432 Monroe Avenue, Chicago, Ill.

NORTHWESTERN. *President*, Claude E. Stevens, '01. *Treasurer*, William G. Jones, Ex. '90. *Secretary*, Moncrieffe Cameron, '00, Seattle, Wash.

ST. LOUIS. *President*, David S. H. Smith, '62. *Treasurer*, John B. Edwards, '96. *Secretary*, Augustus L. Abbott, '80, Times Building, St. Louis, Mo.

ROCKY MOUNTAIN. *President*, James C. Starkweather, '80. *Vice-President*, Luke Kavanaugh, '98. *Treasurer*, C. Henry Smith, '99. *Secretary*, Charles P. Bennett, '79, Colorado Springs, Col.

JAPAN. *Secretary*, Walter B. Bullen, '99, 27 Nakajima Cho, Sendia, Japan.

THE ALUMNAE ASSOCIATION OF BROWN UNIVERSITY

OFFICERS FOR 1910-11

President: Mrs. WALTER COCHRANE BRONSON, A.M., Providence.
Vice-President: Miss SARAH GRIDLEY ROSS, A.B., Providence.
Recording Secretary: Mrs. DAVID POTTER MOULTON, A.M., Providence.
Corresponding Secretary: Miss MARY DREW VAUGHAN, PH.B., 150 Pitman Street, Providence.
Treasurer: Mrs. FLORENCE JOSEPHINE WHITING, A.M., Plainville, Mass.

ALUMNAE ASSOCIATIONS

NEW YORK. *President*, Mrs. W. W. Fisher, '96. *Vice-President*, Mrs. Freeman Putney, Jr., '99. *Treasurer*, Miss Louise Schofield, '07. *Secretary*, Miss Miriam F. Slocum, '00.

BOSTON. *President*, Mrs. Andrew S. Thomson, '99. *Vice-President*, Mrs. Leonard W. Williams, '95. *Secretary and Treasurer*, Miss Helen B. Albro, '06.

TABLE SHOWING RENT AND LOCATION OF DORMITORY ROOMS

HOPE COLLEGE

No.	*Division*	*Floor*	*Windows face*	*Bedrooms*	*Rent*
1	South	1	E. & S.	There are no separate bedrooms, but Nos. 1 and 2, 5 and 6, 9 and 10, 35 and 36, 39 and 40, 43 and 44, can be used either as suites or as single rooms.	$126
2	"	"	W. & S.		132
3	"	"	W.		126
4	"	"	E.		123
5	"	2	E. & S.		126
6	"	"	W. & S.		132
7	"	"	W.		126
8	"	"	E.		123
9	"	3	E. & S.		117
10	"	"	W. & S.		123
11	"	"	W.		117
12	"	"	E.		111
13	"	4	E. & S.		111
14	"	"	W. & S.		117
15	"	"	W.		111
16	"	"	E.		108
17	Middle	1	E.		123
18	"	"	W.		126
19	"	"	W.		126
20	"	"	E.		123
21	"	2	E.		123
22	"	"	W.		126
23	"	"	W.		126
24	"	"	E.		123
25	"	3	E.		111
26	"	"	W.		117
27	"	"	W.		117
28	"	"	E.		111
29	"	4	E.		108
30	"	"	W.		111
31	"	"	W.		111
32	"	"	E.		108
33	North	1	E.		123
34	"	"	W.		126
35	"	"	W.		138
36	"	"	E.		138
37	"	2	E.		123
38	"	"	W.		126
39	"	"	W. & N.		138
40	"	"	E. & N.		138
41	"	3	E.		111
42	"	"	W.		117
43	"	"	W. & N.		126
44	"	"	E. & N.		126
45	"	4	E.		108
46	"	"	W.		111
47	"	"	W. & N.		117
48	"	"	E. & N.		117

UNIVERSITY HALL

No.	*Division*	*Floor*	*Windows face*	*Bedrooms*	*Rent*
4	South	1	W.	*None*	$130
10	"	2	S. & W.	2	250
12	"	"	W.	*None*	115
13	"	"	W.	"	115
16	"	"	E.	"	100
17	"	"	E.	"	106
18	"	"	E. & S.	"	133
19	"	3	S. & W.	2	240
21	"	"	W.	*None*	112
22	"	"	W.	"	112
25	"	"	E.	"	100
26	"	"	E.	"	100
27	"	"	E. & S.	"	121
28	"	4	S. & W.	2	220
30	"	"	W.	*None*	100
31	"	"	W.	"	100
33	"	"	E.	"	97
34	"	"	E. & S.	"	121
36	North	1	W.	"	130
40	"	2	W.	"	115
41	"	"	W.	"	115
43	"	"	W. & N.	2	250
44	"	"	E. & N.	*None*	121
45	"	"	E.	"	106
46	"	"	E.	"	106
47	"	3	W.	"	106
48	"	"	W.	"	106
50	"	"	W. & N.	2	240
51	"	"	E. & N.	*None*	115
52	"	"	E.	"	100
53	"	"	E.	"	100
54	"	4	W.	"	100
55	"	"	W.	"	100
57	"	"	W. & N.	2	210
58	"	"	E. & N.	*None*	115
59	"	"	E.	"	97
60	"	"	E.	"	97

SLATER HALL

1	South	1	E. S. & W.	2	260.00
2	"	"	E. & W.	1	200.00
3	"	2	E. S. & W.	2	260.00
4	"	"	E. & W.	2	245.00
5	"	3	E. S. & W.	2	250.00
6	"	"	E. & W.	2	245.00
7	"	4	E. S. & W.	1	175.00
8, 9	"	"	W.	1	194.00
10	North	1	E. & W.	2	269.50
11	"	"	E. W. & N.	2	269.50

SLATER HALL (*continued*)

No.	*Division*	*Floor*	*Windows face*	*Bedrooms*	*Rent*
12	North	2	E. & W.	2	$269.50
14	"	"	W. N. E.	2	286.00
15	"	3	W. & E.	2	264.00
17	"	"	W. N. E.	2	275.00
18, 19	"	4	E. & W.	1	206.80
20	"	"	W. N. E.	1	176.00

CASWELL HALL

1	North	1	E. N. & W.	1	375
2	"	"	E. & W.	1	350
3	"	2	E. N. & W.	2	375
4	"	"	E. & W.	2	350
5	"	3	E. N. & W.	2	375
6	"	"	E. & W.	2	350
7	"	4	E. & N.	*None*	195
8	"	"	W. & N.	"	195
9	"	"	W.	"	165
10	"	"	E.	"	165
11	Middle	1	"	"	175
12	"	"	W.	"	175
13	"	"	"	"	175
14	"	"	E.	"	175
15	"	2	"	"	185
16	"	2	W.	"	185
17	"	"	"	"	185
18	"	"	E.	"	185
19	"	3	"	"	185
20	"	"	W.	"	185
21	"	"	"	"	185
22	"	"	"	"	185
23	"	4	E.	"	165
24	"	"	W.	"	165
25	"	"	"	"	165
26	"	"	E.	"	165
27	South	1	E. & W.	1	350
28	"	1	E. S. & W.	1	375
29	"	2	E. & W.	2	350
30	"	"	E. S. & W.	2	375
31	"	3	E. & W.	2	350
32	"	"	E. S. & W.	2	375
33	"	4	E.	*None*	165
34	"	"	W.	"	165
35	"	"	W. & S.	"	195
36	"	"	E. & S.	"	195

MAXCY HALL

No.	*Floor*	*Windows face*	*Rent*
313	3	E.	$140
314	"	"	140
315	"	E. & S.	140
316	"	W. & S.	135
317	"	W.	135
318	"	"	135
319	"	"	135
320	"	"	135
321	"	W. & N.	135
322	"	E. & N.	140
323	"	E.	140
324	"	"	140
425	4	"	140
426	"	"	140
427	"	E. & S.	140
428	"	W. & S.	135
429	"	W.	135
430	"	"	135
431	"	"	135
432	"	"	135
433	"	W. & N.	135
434	"	E. & N.	140
435	"	E.	140
436	"	"	140

DIRECTORY TO THE DORMITORIES

Hope College, South Division, Rooms 1 to 16.
Hope College, Middle Division, Rooms 17 to 32.
Hope College, North Division, Rooms 33 to 48.
Maxcy Hall, Rooms 313 to 436.
Slater Hall, South Division, Rooms 1 to 9.
Slater Hall, North Division, Rooms 10 to 20.
University Hall, South Division, Rooms 1 to 34.
University Hall, North Division, Rooms 35 to 61.
Caswell Hall, North Division, Rooms 1 to 10.
Caswell Hall, Middle Division, Rooms 11 to 26.
Caswell Hall, South Division, Rooms 27 to 36.

SUMMARY OF STUDENTS

UNDERGRADUATE MEN

Seniors	127
Juniors	146
Sophomores	162
Freshmen	183
Special Students	38
Total	656

THE WOMEN'S COLLEGE

Seniors	43
Juniors	34
Sophomores	49
Freshmen	54
Special Students	18
Total	198

GENERAL SUMMARY

Graduates	80
Undergraduate Men	656
Women's College	198
	934
Deduct for names counted twice	3
Total	931

DIRECTORY OF OFFICERS AND STUDENTS

The addresses given are in Providence, unless otherwise stated. If an officer is on leave of absence for the year, his name is bracketed. The following abbreviations are used: *Fr.* = Freshman; *So.* = Sophomore; *Jr.* = Junior; *Sr.* = Senior; *Sp.* = Special Student; *Gr.* = Graduate Student; *W.* = Women's College; *J. C. B. L.* = John Carter Brown Library; H. = Hope College; U. = University Hall; S = Slater Hall; M. = Maxcy Hall; C. = Caswell Hall; B. = Brunonia Hall; 65 College = 65 College Street, Providence, etc. Where no state is mentioned Rhode Island is to be understood. The number *precedes* the name of a street, but *follows* the name of a building.

Abbott, C. H., *So.* H. 38
Abbott, F. R., *Fr.* 84 Anthony Ave.
Abercrombie, D. W., *Trustee* Worcester, Mass.
Ackley, V. A., *Fr.* U. 47
Adams, E. A., *Jr.* 41 George
Adams, G. A., *Sp.* B. 4
Adelman, D. I., *Fr.* 228 Prairie Ave.
Affleck, J. G., Jr., *Fr.* C. 6
Algeo, Mrs. S. M., *Gr.* 394 Angell
Allen, E. B., *Sr.* 101 Waterman
Allen, Miss G. M., *Clerk, Lib.* Riverside
[Allinson, F. G.,] *Professor* 163 George
[Allinson, Mrs. F. G.,] *Adv. Council, W.* 163 George
Anderson, E. A., *W. Jr.* 118 Cushing
Anderson, E. G., *W. Sp.* 31 Babcock
Anderson, J. A., *Sr.* H. 28
Anderson, T. D., *Sec'y of Corporation* Brookline, Mass.
Andrews, H. A., *W. Fr.* 72 President Ave.
Andrews, L. H., *W. Sr.* 63 Barnes
Andrews, R. B., *Jr.* 54 College
Andrews, W. C., *Fr.* M. 324
Angell, L. M., *W. Jr.* 98 Cushing
Anthony, C. W., *Fr.* West Barrington
Anthony, W. B., *So.* 110 Waterman
Appleton, J. H., *Prof.* 209 Angell
Appleton, M., *W. Fr.* 209 Angell
Appleton, P., *Sr.* No. S.
Archambault, C. F., *Jr.* P. O. Box 263, Arctic
Archibald, R. C., *Instr.* 9 Charles Field
Archie, J. C., *Sr.* B. 1
Arnold, E. B., *Sr.* 101 Waterman
Arnold, J. O., *Physician, W.* 101 Brown
Arnold, P. F., *So.* H. 43
Arnold, S. T., *So.* U. 53
Aron, S. L., *So.* 68 Bishop
Aronovici, C., *Gr.* 55 Eddy
Aronson, H. H., *Fr.* M. 435
Ashbaugh, R. G., *So.* 41 George
Ashton, J. H., *Engineer* 29 Preston
Ashton, L. R., *Fr.* U. 27
Atwater, R. M., *Trustee* Chadds Ford, Pa.
Austin, C. R., *Gr.* 238 Jackson, Trenton, N. J.
Austin, D. E., *Fr.* C. 4
Ayres, C. E., *Jr.* 110 Waterman

Babcock, L. E., *Fr.* U. 47
Babington, V. E., *Sr.* U. 48
Bachmann, J. H., *Instr.* 86 Prospect
Bagnall, C. L., *Fr.* C. 13
Bailey, W. E., *So.* 94 Angell
Bailey, W. W., *Prof. Emeritus* 6 Cushing
Baker, B. H., *W. Sp.* 118 Cushing
Baker, M. W., Jr., *Sr.* H. 33
Baker, R. H., *Asst. Prof.* Ladd Observatory
Bancroft, R. M., *W. Jr.* 68 Lloyd Ave.
Banfield, S. M., *Sp.* B. 12
Banigan, J., *Sp.* 468 Angell
Banigan, R. D., *Sp.* H. 35
Banks, H. C., *So.* C. 19
Banks, M. A., *W. Fr.* 197 Colfax
Barbour, T. S., *Trustee* Tremont Temple, Boston, Mass.
Barker, E. S., *Jr.* 65 College
Barker, H. O., *Sr.* 54 College
Barnicle, M. E., *W. So.* 221 Messer
Barr, J. H., *W. So.* 117 Howell
Barrett, H. I., *W. So.* 20 Babcock
Barrington, L., *Fr.* U. 25
Barrows, F. C., Jr., *Jr.* C. 17
Barry, C. A., *Sr.* 110 Waterman
Barry, D. F., *So.* U. 34
Barstow, G. E., *W. Sp.* 224 Angell
Bartlett, A. E., *Fr.* U. 44
Barus, C., *Prof.; Dean of Graduate Dept.* 30 Elmgrove Ave.
Barus, Mrs. C., *Adv. Council, W.* 30 Elmgrove Ave.
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Bassett, L. M., *W. Sr.* 182 Meeting
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Bates, M. C., *W. Fr.* 55 Bainbridge
Baxter, H. S., *W. Fr.* 118 Cushing
Baxter, I. E., *Gr.* 370 Thayer
Bayley, M. H., *W. So.* 118 Cushing
Beal, F. W., *Instr.* 256 Doyle Ave.
Bean, S. S., *Fr.* U. 44
Beckwith, H. L. P., *Fr.* 56 Waterman
Bedell, I. M., *W. Sr.* 184 Meeting
Beebe, Miss J. E., *Stenographer, Physical Dept.* 47 George
Beechen, A. E., *Fr.* 456 West Ave., Pawtucket
Belanger, I. M. C., *W. So.* 125 Governor
Beliavsky, J., *Sr.* 22 James
Bell, H. N., *W. Sr.* 118 Cushing
Bell, K. S., *Jr.* 110 Waterman
Benedict, G. W., *Assoc. Prof.* 16 John
Bennell, R. J., *So.* S. 4
Bennett, A. A., *Gr. Asst.* 100 Waterman
Bennett, H. C., *W. Jr.* 113 East Manning
Bennett, M. E., *W. Jr.* 113 East Manning
Berriman, E. W., *Fr.* C. 5
Bien, Z. S., *Sp.* 81 Barnes
Bingham, H. E., *Jr.* H. 24
Bingham, R. W., *Fr.* U. 26
Bishop, F., *Asst.* U. 36
Bishop, L. M., *Sp.* 41 George
Bishop, M. C., *W. Jr.* 118 Cushing
Blackway, C. E., *Fr.* M. 425
Blake, F. C., *So.* H. 12
Blake, P. W., *Jr.* B. 1
Blake, S., *Jr.* 37 Grove, Lonsdale
Blanchard, A. H., *Assoc. Prof.* 62 University Ave.
Blanchard, E. H., *So.* U. 46
Blanchard, E. P., *So.* C. 22
Bliss, E. F., *Sr.* C. 12
Bliss, H. B., *Sr.* 41 George
Blomberg, C. H., *So.* 94 Angell
Bloom, B. E., *W. Sr.* 75 Benefit
Bloomfield, V. G., *W. So.* 2 Crossman, Central Falls

Boardman, E. H., *Jr.* H. 22
Boardman, Miss E. M., *Gr.* 112 Ring
Boardman, I. T., *Fr.* 112 Ring
Boas, G., *So.* 184 Atlantic Ave.
Bodfish, E., *W. Fr.* 118 Cushing
Bogle, M. L., *W. So.* 188 Meeting
Bohl, L. T., *So.* 32 Henry, Edgewood
Borden, R. F., *Fr.* 24 George
Borden-Smith, H. S., *Jr.* 106 George
Borland, A. P., *W. Jr.* 20 Nebraska
Bosworth, A. D., *W. Fr.* 160 Burrington
Bosworth, E. C., *Sr.* H. 17
Bosworth, M. E., *W. So.* Georgiaville
Bosworth, M. L., *W. Fr.* 259 Blackstone
Boudreau, A. H. O., *Fr.* H. 21
Bourgeois, A., *W. So.* 5 Hidden
Boyd, W. E., *Fr.* 489 Hope
Brackett, E. T., *So.* 132 Angell
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Brady, W. A., *Gr.* Narragansett Pier
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Breckenridge, A. L., *Sr.* H. 12
Brennan, C. J., *Fr.* 167 Power
Brennan, J. B., Jr., *Sr.* U. 16
Briggs, D. S., *W. Fr.* 141 Superior
Briggs, H. H., *W. Fr.* 141 Superior
Briggs, L. R., *So.* B. 12
Bronson, H. R., *W. So.* 77 Camp
Bronson, W. C., *Prof.* 77 Camp
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Brooks, R. C., *W. So.* 29 Thayer
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Brown, H. A., *Fr.* 107 George
Brown, H. C., *So.* U. 53
Brown, H. G., *Jr.* 835 Hope
Brown, J. W., *Jr.* C. 33
Brown, L., *Trustee* 16 Warren, Norwich, Ct.
Brown, L. C., *So.* U. 30
Brown, L. J., *W. Fr.* Barrington
Brown, W. S., *Sr.* U. 25
Browne, A. M., *W. So.* 232 Cottage, Pawtucket
Browne, W. W., *Gr.* 157 Williams
Browning, M., *W. So.* 39 Underwood
Browning, S. A., *W. So.* 118 Cushing
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Burbank, R. W., *Sec. Brown Union* 37 Barnes
Burdon, M., *W. Fr.* 118 Cushing
Burgess, C. E., *So.* 100 Waterman
Burgess, F., Jr., *Jr.* C. 26
Burgess, G. S., *Jr.* 54 College
Burgess, W. R., *Jr.* 100 Waterman
Burke, H. M., *Sr.* U. 16
Burlingame, E. A., *Supt. Grounds and Buildings* 359 Brook

Burnell, R. L., *Fr.* H. 47
Burnham, C. E., *Jr.* B. 1
Burnham, R. E., *So.* H. 21
Burnham, W. R., *Fr.* H. 23
Burrage, H. S., *Fellow* Togus, Me.
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42 Walker, Pawtucket
Campbell, E. R., *Fr.* H. 15
Campbell, G. H., *W. Sr.*
71 Sycamore
Canada, A. S., *W. Sr.* 36 Ralph
Canfield, R. H. M., *Sr.* 94 Angell
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Carman, C. A., *Gr.* C. 4
Carpenter, E. S., *Sr.* H. 46
Carr, L. H., *So.* H. 38
Carter, L. W., *Fr.* M. 432
Case, J. R., *So.* H. 32
Case, Miss M. W., *Gr.* 53 Grove
Casey, J., Jr., *So.* S. 7
Caswell, R. G., *Jr.* 110 Waterman
Cate, B. H., *Sr.* 41 George
Catlin, M. F., *W. Jr.* 118 Cushing
Cawley, C. J., *Sr.*
198 Juniper, East Prov.
Cawthorne, H. F., *Sr.* H. 12
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Chace, H. R., Jr., *Sr.* 54 College
Chace, J., *Trustee* Valley Falls
Chace, M. R., *So.* H. 18
Chadwick, R. H., *Jr.* H. 24
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89 Courtland
Champney, H. H., *Fr.*
397 Winthrop, Taunton, Mass.
Chapman, M. M., *W. Fr.* 129 Moore
Chapman, W. I., *Gr.*
7 Jackson, Attleboro, Mass.
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Chase, F. A., *So.* Mansfield, Mass.
Chase, L. C., *Sr.* Plainville, Mass.
Chase, R. D., *Sr.* 81 Waterman
Chesley, J. O., *Sr.* B. 2
Chesley, M., *Fr.* H. 35
Chinard, G., *Instr.* 11½ John
Christian, R. N., *Fr.* 65 College
Christianson, A. O., *Jr.* M. 429
Chrystie, R. J., *Gr.* 34 Preston
Church, M. B., *W. Jr.*
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Clark, J. C., *Sr.* 81 Waterman
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152 Congdon
Clark, W. L., *So.* 54 College
Clarke, M. F., *W. So.* Centerville
Cleasby, C. S., *Sr.* H. 18
Cleaveland, E. R., *Fr.* U. 21
Cloues, A. S., *Jr.* C. 34
Clow, B. A., *W. Fr.* 184 Meeting
Coburn, R. V., *So.* U. 40
Cockroft, G. A., *W. Fr.* 38 Congdon
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Colby, G., *Trustee*
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Collins, J. F., *Asst. Prof.* 468 Hope
Collins, K., *Fr.* 65 College
Collins, M. G., *W. Jr.* 118 Cushing

Collins, P. D., *So.* 101 Waterman
Collins, S. C., *Jr.* 54 College
Colwell, R. C., *So.* 132 Angell
Comstock, A. B., *Gr.* C. 20
Conant, E. B., *So.* 110 Waterman
Conant, G. M., *W. Jr.*
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Connor, H. R., *Sr.* 115 Waterman
Conzelman, J. H., *Jr.* 94 Angell
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Cook, E. P., *Fr.* C. 8
Cook, J. E., *So.* M. 436
Cook, J. W., *W. Fr.*
155 Elm, Fall River, Mass.
Cooke, R. E., *W. Fr.* 45 Arch
Coolidge, E. F., *W. So.* 125 Governor
Cooper, F. E., *So.* H. 32
Corcoran, C. M., *Sp.* 363 Plainfield
Corp, A. E., *Sr.* 94 Angell
Cosgrove, Miss L. R., *Gr.*
176 Congdon
Cram, F. M., *Fr.* U. 12
Crapo, L. C., *W. Sr.* 32 Vernon
Crawshaw, J. L., *Jr.* B. 10
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Cristy, G. L., *Fr.* H. 14
Crocker, L. V., *So.* U. 51
Crooks, M., *W. Fr.* 58 Meeting
Crolius, W. C., *Fr.* No. S.
Crosby, T., *Assoc. Prof.* 49 George
Crossley, Miss F. A., *Gr.* 1412 Broad
Crossley, M. L., *Gr. Instr.*
110 Waterman
Crowell, A. C., *Assoc. Prof.*
345 Hope
Crowther, C. W., *Fr.* H. 13
Crowther, G. M., *So.* H. 13
Crum, R. B., *So.* C. 30
Cummings, J. L., *Fr.* M. 429
Cummings, L. R., *Jr.* C. 33
Cummings, W. W., *Jr.*
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[Currier, C. H.,] *Instr.* U. 2
Currier, C. W. G., *Fr.* H. 39
Curry, K. E., *W. Fr.* 52 Peace
Curtis, P. C., *Sr.* 81 Waterman
Cushing, H. L., *Fr.* Seekonk, Mass.
Cushman, F. R., *Gr.* 19 Bellevue
Cushman, J. H., *So.* B. 10
Cutler, M. E., *W. Fr.*
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Czubak, Z. J., *Fr.* M. 321

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Dale, N. C., *Gr. Instr.* 330 Benefit
Damon, L. T., *Prof.* U. 36
Dane, E. B., *Sr.* 94 Angell
Davenport, L. L., *W. So.*
158 Pine, Pawtucket
Davis, C. A., *Fr.* H. 42
Davis, F. P., *So.* 64 Keene
Davis, N. F., *Prof.* 159 Brown
Deady, W., Jr., *Fr.* H. 30
Dealey, J. Q., *Prof.* 872 Hope
Deckard, W. W., *Gr.*
116 Gladstone, Arlington
Degnan, Miss K. H., *Gr.*
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Delabarre, E. B., *Prof.*
9 Arlington Ave.
Delano, E. R., *So.* U. 59
Deming, W. S., *Jr.* H. 3
Dennis, H. K., *So.* B. 4
Devine, M. F., *W. Fr.* 118 Cushing
Dexter, R. C., *Jr.* 100 Waterman
Dexter, T. E., *Gr.*
46 Washington, Central Falls
Dexter, V. M., *W. So.* 91 Lester
Dike, D., *Fr.* C. 14
Dinkins, W. H., *Jr.* U. 55
Dishman, S. B., Jr., *Sr.* B. 2
Dodge, W. E., *So.* H. 21
Domin, L. V., *Jr.* C. 34
Donle, E. R., *Sr.* 94 Angell

Donovan, D. G., *Jr.* U. 50
Douglas, B., *W. Fr.* 118 Cushing
Douglass, W. W., *Trustee* 107 Prospect
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Dow, G. S., *Gr.* M. 313
Dow, H. E., *Fr.* H. 36
Dowell, N. E., *W. So.* Greystone
Doyle, Miss S. E., *Adv. Council, W.* 119 Prospect
Droege, J. A., Jr., *Fr.* 52 Patterson
Drowne, F. O., *Sr.* B. 9
Drowne, H. B., *Instr.* 368 Cranston
Drury, R. S., *Jr.* C. 15
Duane, J. M., *Trustee* 59 Wall, New York, N.Y.
Duckworth, A. B., *W. Fr.* 307 Prospect, Pawtucket
Dugan, P. F., *Fr.* U. 59
Dukette, E. R., *Fr.* H. 35
Dumbleton, H. F., *So.* H. 44
Durfee, E. C., *So.* H. 15
Durgin, A. D., *Fr.* H. 42

Eastburn, A. C., *Jr.* 41 George
Easton, F. W., Jr., *Fr.* H. 22
Easton, H. E., *Sr.* 41 George
Eastwood, W. R., *So.* 101 Waterman
Edwards, J., *Asst. Ladd Obs.* 210 Doyle Ave.
Edwards, S. O., *Trustee* 181 Lloyd Ave.
Ehmke, L. D., *Fr.* 127 Benefit
Ellinwood, M., *W. Sp.* 12 Catalpa Road
Elms, J. C., Jr., *Jr.* 54 College
Emmons, W. J., *Jr.* C. 22
Emsley, M. J., *W. Jr.* No. Scituate
English, J. M., *Trustee* Newton Centre, Mass.
Ervin, J., Jr., *Sr.* H. 13
Everett, E. I., *Fr.* 13 Benevolent
Everett, W. G., *Prof.* 116 Governor

Farnham, J. H., *Fr.* 71 Barnes
Farnsworth, A., *Gr.* 27 Benefit
Farnsworth, J. P., Jr., *Gr.* No. S.
Farnsworth, T. B., *Jr.* B. 13
Farwell, A. P., *Gr. Asst.* 32 Carleton
Faunce, W. H. P., *President* 180 Hope
Feitelberg, A., *Fr.* M. 319
Ferguson, J. B., *Dem'r.* 369 Broad
Ferguson, P. W., *Fr.* H. 1
Ferry, O. R., *Jr.* M. 316
Field, A., *W. Sr.* 222 Medway
Field, H. E., *So.* 4 Elton
Field, R. F., *Gr. Asst.* 25 Wilson
Field, R. W., *So.* No. S.
Files, C. A., *Fr.* H. 47
Fill, C., *W. So.* 118 Cushing
Fine, L. M., *Fr.* 4 Ambrose
Firebaugh, C. W., *Fr.* U. 45
Fisher, C. E., *Gr.* 232 Pleasant
Fisher, C. E., *Fr.* H. 1
Fisher, W. N., *Fr.* C. 2
Fitz, E. S., *Sr.* H. 46
Flagg, M. M., *W. Fr.* 118 Cushing
Flaherty, A. M., *W. Fr.* 28 John, Valley Falls
Fleagle, F. K., *Gr.* Rio Peidras, P.R.
Fletcher, T. L., *Jr.* 41 George
Fogg, M. M., *W. Jr.* 118 Cushing
Foote, H. E., *Fr.* H. 37
Forrist, J. H., *Sr.* 276 Washington Ave.
Forward, M. K., *Fr.* H. 20
Foss, S. W., *Fr.* U. 12
Fowler, H. M., *W. So.* 118 Cushing
Fowler, H. T., *Prof.* 127 Lloyd Ave.
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Francis, P. H., *Jr.* 385 Laurel Hill Ave.
Franklin, C. M., *Sr.* 6 Saunders, Pawtucket

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Frost, M. F., *Sp.* Rumford

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Gallagher, M. H., *Sr.* 121 Angell
Gallant, R. B., *Fr.* U. 18
Gammell, R. I., *Trustee* 50 So. Main
Gardiner, E. R., *W. Sp.* 156 Cypress
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Gardner, K. D., *So.* 41 George
Gardner, L., *Sr.* 4 Manning
Gardner, R. N., *Sr.* 4 Manning
Garrett, W. H., *So.* 132 Angell
Gay, L. J., *Asst.* 5 Porter
Gelb, V. C., *So.* 4 Manning
Gerber, S., *W. Sr.* 118 Cushing
Gibbs, F. B., *So.* 110 Waterman
Gibbs, Miss L. R., *Cataloguer* 66 College
Giblin, J. V., *Fr.* M. 315
Gifford, C. F., *Jr.* H. 28
Gifford, G. H., *Sr.* C. 12
Gilbert, J. J., *Jr.* U. 16
Giles, W. C., *Sr.* 65 College
Gillespie, L. J., *Gr. Asst.* M. 313
Gilliland, H. A., *W. Fr.* 118 Cushing
Gillis, R. A., *Sp.* 53 Tobey
Glassey, E. E., *Fr.* M. 434
Gleason, F. R., *Sp.* C. 16
Goddard, H. R. I., *Fellow* 50 So. Main
Goff, R. E., *Sp.* H. 35
Goldberg, J. S., *So.* C. 17
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Gormly, M., Jr., *Jr.* M. 431
Gould, A. G., *So.* M. 321
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[Grose, H. B., Jr.,] *Instr.* U. 2
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Harkness, A. G., *Prof.* 7 Cooke
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Hazard, R. G., *Fellow* Peace Dale
Hebner, G. E., *Fr.* M. 427
Hefner, C. E., *W. Sr.* 125 Governor
Heltzen, F. V., *W. Fr.* 238 Waterman
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Himes, L. S., *W. So.* Phenix
Hinckley, J. E., *Sr.* C. 19
Hindle, C. D., *Jr.* H. 26
Hinton, M. I., *W. Sr.* 118 Cushing
Hodges, G. W., *Fr.* 152 Congdon
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Holding, R. S., Jr., *Fr.* 279 Benefit
Holman, A. D., *W. Sr.* 118 Cushing
Holman, S. M., Jr., *Jr.* 41 George
Holt, G. H., *Gr.* H. 4
Holt, N. E., *Gr. Instr.* 115 Governor
Holt, S. A., *W. So.* 11 Hayward, Pawtucket
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Hull, N. B., *So.* C. 30
Humphrey, K., *Jr.* 100 Waterman
Hunkins, C. H., *Instr.* 107 Angell
Huntington, H. B., *Assoc. Prof.* 23 John
Hurlin, R. G., *Jr.* 100 Waterman

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Jacobs, W. B., *Prof.* 310 Olney
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Jetter, P., *Fr.* M. 321
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Jones, H. P., *Jr.* 94 Angell
Jones, M. L., *Fr.*
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Jones, T., *W. So.* 127 Howell
Josselyn, L. W., *Asst.* Library
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Kenney, H. W., *Jr.* M. 313
Kenyon, A. E., *Fr.* 100 Waterman
Keresey, F. X., *So.* U. 50
Kiernan, A., *Sr.* 110 Waterman
Killam, L. R., *Gr.*
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King, H. M., *Trustee* 8 Cushing
King, I. A., *Fr.* B. 10
King, Miss L. S., *Dean, W.; Prof.* 8 Cushing
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Knights, E. L., *W. Sr.*
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167 Wadsworth
Kohler, H. L., *Sp.* 65 College
Koopman, H. L., *Librarian*
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Kratz, O. M., *So.* 10 Congdon
Kulp, D. H., *So.* U. 4

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Lahy, W. M., *Fr.* C. 1
Lake, E. M., *W. So.* 118 Cushing
Lakey, F. E., *Gr.*
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Lamond, W. D., *So.* S. 6
Lane, R. A., *Gr.*
39 Catawba, Boston, Mass.
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Langdon, G. W., Jr., *Jr.* C. 36
Langley, A. L., *So.* M. 318
Lapham, O., *Trustee* 183 Waterman
Larkin, J. C., *Sr.* H. 26
Lasker, L. H., *W. Sp.* 12 Mallett
Legris, J. M., *Fr.* Arctic
Leith, R. W., *Jr.* C. 7
Leland, C. L., *Sr.* 94 Congdon
Lemon, A. B., *So.* U. 4
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Lester, M. B., *W. Sr.* 118 Cushing
Letts, I. L., *So.* C. 8

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Long, R., *W. Sp.* 10 Congdon
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Lord, R. M., *Fr.* 34 Cushing
Loucks, F. L., *Fr.* M. 425
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Low, R. B., *Fr.* 152 Congdon
Lowrie, W. J., Jr., *Fr.* C. 1
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Luber, A., *So.* 40 Bowen
Luther, M. R., *W. So.* 81 Camp

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McDuff, F. E., *Fr.* U. 16
McGehearty, J. F. J., *Jr.* U. 50
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McGuire, J. T. C., *Jr.* C. 9
McKay, J. R., *Sr.* H. 8
McKay, R. C., *Fr.* H. 8
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MacLaughlin, J. F., *Jr.* 26 Amity
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Mahoney, D. R., *So.* M. 431
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Marble, W. H., *Jr.* S. 2
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Marsh, S. P., *Jr.* S. 5
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Martin, F. S., *So.* M. 317
Martinez, C., *Sp.* 41 Angell
Marvel, F. W., *Prof.* 281 Olney
Mason, E. W., *Trustee* 149 Waterman
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Mason, M. C., *Fr.* M. 315
Maxson, C. C., Jr., *Sp.* 65 College

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Miner, I. D., *Sp.* H. 2
Misch, W. P., *So.* 400 Westminster
Mitchell, M. R. M., *W. Sp.* 612 Angell
Mitchell, P. H., *Instr.* 19 Creighton
Mitchell, R. M., *Gr. Instr.* 144 Congdon
Mitchell, S. L., *Jr.* 132 Angell
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Moffitt, J. B., *W. Sr.* 56 East Manning
Mohler, M., *Sr.* 139 Governor
Monroe, J. I., *W. Jr.* 107 Davis
Montz, J. M., *Sr.* U. 34
Moore, E. R., *W. Sp.* 38 Mawney
Moore, G. D., *Sr.* H. 16
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Murphy, R. C., *Sr.* 100 Waterman

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Nash, K. L., *Jr.* 81 Waterman
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Neal, E. L., *Fr.* 167 Pleasant
Nelson, H. G., *So.* S. 6
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Neves, J. S., *Sr.* U. 48
Newell, A. F., *Jr.* 100 Waterman
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Newman, L. I., *So.* H. 33
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Nicholson, H. S., *W. Sr.* 8 Stuart, Pawtucket
Nicholson, N. B., *W. Sr.* 105 Bates
Nolan, C. A., *Sr.* U. 48
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Noyes, W. B., *Fr.* C. 24
Nulty, C. F., *W. Sr.* 125 Governor

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Obear, G. B., *Gr.* 9 Charles Field
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O'Connor, F. D., *Jr.* C. 23
O'Neil, J. T., *Sr.* U. 51
Osborne, M. I., *W. Fr.* 118 Cushing
Oshman, L., *So.* U. 31
Ossberg, A. I., *Fr.* U. 45
Osteyee, H. F., *So.* H. 44
Ottley, A. E., *W. So.* 241 Valley

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Palmer, W. A., *W. So.* 1536 Cranston
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Parker, E. A., *So.* 18 Elmhurst Ave.
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Parsons, E. S., *Fr.* H. 17
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Paton, J., *Fr.* U. 26
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Perkins, J., *Dem'r.* 106 Waterman
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Price, H. O., *W. Fr.* 153 West Clifford
Pride, W. F., *Fr.* 650 Broad
Protheroe, A. W., *Fr.* H. 3
Pryor, J. D., *Gr.* 10 Hopkins
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Purdy, M. M., *Jr.* C. 22
Purvis, W. B., *Jr.* M. 321
Pusey, L. B., *Fr.* U. 25

Quigley, T. H., *Sr., Gr.* M. 323

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Randall, H., *Fr.* M. 427
Randall, O. A., *W. Jr.* 556 Cranston
Randall, O. E., *Prof.* 65 Weymouth
Ranger, A. F., *Fr.* 267 Gano
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Regan, J. W., *Sp.* 321 Washington
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Remington, H., *Fr.* C. 13
Repko, G. A., *Jr.* 81 Waterman
Repko, J. S., *So.* 81 Waterman
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Reynolds, H. P., *Fr.* M. 436
Ricci, J. V., *Jr.* 639 Charles
Rice, H. A., *Fr.* M. 428
Rice, K. S., *So.* 132 Angell
Richardson, R. G. D., *Asst. Prof.*
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Richardson, R. P., *Sr.*
Dighton, Mass.
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Ricker, J. E., *Fr.* H. 36
Robbins, L. F., *Sp.* 101 Waterman
Roberts, M. E., *Jr.* 132 Angell
Roberts, T. H., *So.* 110 Waterman
Robertson, W. C., *Jr.* B. 9
Robertson, W. H., *Jr.* 81 Waterman
Robinson, B. I., *So.* 51 Goddard
Robinson, J. F., *W. Sr.*
254 Washington
Robinson, R. D., *So.* C. 10
Robinson, R. S., *Sr.* 41 George
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Roelke, H. E., *Jr.* B. 10
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Ronne, G. E., *Fr.* S. 5
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Roper, F. E., *Sr.* M. 433
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Rosenberg, H. M., *So.* U. 31
Ross, Miss S. G., *House Mistress, Miller Hall* 118 Cushing
Rossire, H. L., *Gr.* 12 George
Round, L. A., *Gr.* Clayville
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Rowland, J. H., *Jr.* H. 45
Rowland, S. J., *Fr.* H. 45
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Ryther, C. E., *W. Jr.* 13 Pitman
Ryther, R. E., *W. So.* 13 Pitman

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Savacool, L. B., *Fr.* U. 40
Sawin, M. E., *Fr.* C. 29
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Sears, M. E., *W. Fr.*
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Seidel, H. G., *Sp.* 4 Manning
Semle, F., *W. Sp.* 127 Benefit
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Shaffer, H. R., *Sp.* So. Scituate
Sharpe, H. D., *Trustee* 130 Angell
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Shedd, T. C., *So.*
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Sheldon, M. H., *So.* H. 37
Shepard, J. I., *Fr.* S. 4
Shepard, Miss M. E., *Gr.* Barrington
Shepherd, L. A., *Sr.* 81 Waterman
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Sherman, W. A., *Sr.* 110 Waterman
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Sisson, H., *W. Fr.* 458 Hope
Sisson, R. E., *Sr.* 54 College
Sisson, R., *W. Fr.* 458 Hope
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Skillings, R. F., *Sr.* C. 16
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Smith, H. R., *Fr.* M. 428
Smith, I. R., *Jr.* C. 20
Smith, L. E., *Jr.* 101 Waterman
Smith, L. W., *So.* H. 37
Smith, R. L., *Fr.* C. 11
Smith, S. M., *W. Fr.* 118 Cushing
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Snell, W. H., *So.* 81 Waterman
Snow, B. G., *W. So.*
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Tanaka, Kotaro, *Gr.* 189 Williams
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Taylor, M. W., *W. So.* 22 Arch
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Tedford, T. L., *Jr.* 132 Angell

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Thompson, L. H., *So.* 81 Waterman
Thomson, R. S., *So.* 119 Cedar, Pawtucket
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Torrey, C. H., *So.* U. 22
Townsend, S. A., *Fr.* B. A.
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Tucker, P. W., *So.* H. 15
Tyrrell, J. J., *Fr.* 90 Carpenter, Pawtucket

Underwood, H. M., *W. So.* 209 Pleasant
Upton, W., *Prof.* 156 Cypress

Valentine, H. M., *W. Sr.* 118 Cushing
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Walker, J. T., *So.* 36 Olive
Walker, R. M. S., *Sp.* 60 Sherwood
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Wallace, H., *Sr.* 65 College
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Walter, H. E., *Asst. Prof.* 53 Arlington Ave.
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Ward, L. F., *Prof.* U. 2
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Warner, E. E., *Jr.* C. 15
Warren, I., *W. Jr.* 184 Meeting
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Watson, D. F., Jr., *Sr.* 94 Angell
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Wetmore, W., *Fr.* 152 Congdon
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White, M. A., *W. Sp.* 118 Cushing
White, W. A., *So.* H. 12
Whitman, E. W., *W. So.* 91 Parade
Whitmarsh, G. B., *Fr.* B. 4
Whittemore, T. P., *Fr.* H. 30
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Wilbur, R. K., *Fr.* M. 317

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Wilcox, H. A., *Jr.* H. 19
Wilke, F. H., *So.* S. 6
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Williams, F. C., *So.* H. 43
Williams, J. H., *Jr.* U. 33
Williams, M., *W. Sp.* 53 Elton
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Williams, R., *Fr.* U. 21
Williamson, A. H., *Jr.* 40 Holmes
Wills, R. H., *Jr.* 53 Lisbon
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Wilson, H. O., *So.* C. 18
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Wood, H. H., *W. Fr.* 475 Elmwood Ave.
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Woodward, C. E., *Sp.* 94 Angell
Woolley, C. L., *Fr.* 49 Algonquin
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